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The American Hospital Association

A Magazine for the Hospitals of the United States and Canada

Vol. 14, No. 3 *March, 1940*

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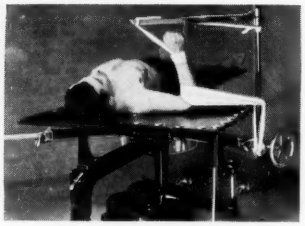

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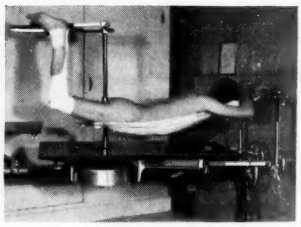

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HOSPITALS

THE JOURNAL OF THE AMERICAN HOSPITAL ASSOCIATION

VOL. 14 MARCH, 1940 No. 3

The Need for Governmental Assistance to Hospitals and Its Effect Upon the Voluntary Hospital System

WILLIAM J. ORCHARD

THE voluntary hospital, as I understand it, is a hospital, operated by a voluntary board of trustees, that is prepared to give free service to those who need it, but that must also be self-supporting by a combination of four sources of revenue, namely, earnings from patients; contributions from charitably inclined persons—either directly or through welfare federation funds; contributions from tax funds; and income from endowments. Let us start off with that basic definition of the voluntary hospital.

I was amazed, when I first looked into this subject, at the scope of the voluntary hospital system. Though many of you are familiar with hospital statistics, let me take some figures from a recent paper by Dr. G. Harvey Agnew, who says that out of 6,500 registered general hospitals, fifty-five per cent are under voluntary direction, and that sixty-three per cent of the beds are in this group. They handle seventy-five per cent of all general hospital patients, and seventy per cent of all hospital-born babies are born each year in voluntary hospitals. Voluntary hospitals represent seventy per cent of all hospitals, and this group handles six million ward patients a year, expends three hundred and fifty million dollars a year for maintenance, and employs half a million people! That is an amazing set of figures, showing the extent of the voluntary hospital system in this country.

The Author

● William J. Orchard is a prominent business and civic leader of the State of New Jersey and Treasurer of the Orange Memorial Hospital, Orange, New Jersey.

Those of us who are charged with the administration of hospitals—not directly, but in an advisory capacity, either as chairmen of committees, or serving on boards of directors or boards of governors—are so beset with the problem of where to find the money with which to carry on, that we do not have all the time we should like to have to devote to the real problems of the hospital, and to learn what we can do to solve them. As trustees, we should give more assistance to the

men who work for our hospitals as administrators, and who, in the last analysis, are responsible for the position of the hospital in the community consciousness. We have not the time to do that, because the problem of money is always with a hospital—as it is with everyone else.

Hospitals as a Business Enterprise

Two years ago, at Atlantic City, Dr. Haven Emerson said that it was impossible to treat a hospital as a business! But I really think we can. It is significant that Dr. Emerson made his statement just after he finished upbraiding trustees as a group for improper business administration of hospitals. So I do think it is time that we hold the mirror of self-analysis in front of us and study ourselves frankly, and recognize the fact that we cannot operate the voluntary hospitals of the community as other business enterprises are operated.

There are all kinds of businesses. We can go to one extreme—but of course we will not. We could put it as bluntly as this from a business man's standpoint: the hospital is a factory for making sick people well, and in that factory we have facilities in the way of equipment and personnel for doing that job; and whether the business of making sick people well is successful or not depends entirely upon the volume of business and the cost of producing it, as reflected in the balance sheet.

Of course, we will not go that far, but if we would just *begin* to think from that viewpoint, then we would begin to appreciate the real need of governmental assistance to the hospitals—unless we bring about a complete change from the present methods of hospital financing.

The Need for Governmental Assistance

I was very happy last week to receive a brochure which is a report of a Committee of the Medical Society of New Jersey—a report which was presented to their House of Delegates last June. Statistics, I appreciate, can be very dry, but this sort of condensed information seems to be more suitable than any other means of presenting clearly the need for governmental assistance.

The report analyses the eighty-three general hospitals of the State of New Jersey—excluding institutions for the insane and hospitals for the tubercular. The committee found that seventy-seven of them were voluntary, and that seventy-two could be classed as voluntary general hospitals—or over seventy-seven per cent of the total. They care for a quarter of a million patients a year and give approximately three million patient-days of service. Sixty-eight per cent of patient-days are given to ward patients and thirty-two per cent to private and semi-private patients. The average stay of private and semi-private patients was ten and two-tenths days, while the average stay of ward patients was thirteen days. The average cost per capita was four dollars and seventy-five cents per day and the average cost for ward patients was four dollars and a half per day.

The Income of the Voluntary Hospital

Then the committee went into this question of the income of the voluntary hospital and found that the patient paid sixty-six per cent of the bill, that incidental service in the hospital paid three per cent, that from voluntary contributions, community chests and otherwise, twelve per cent was received. Endowments represented five per cent of the income, and the tax fund—from one source or another—represented another twelve per cent of the income of the voluntary general hospitals of the State of New Jersey.

Pay Patient Pays Two-Thirds of Operating Costs and Receives One-Third of the Service

The committee goes on to point out that private patients paid two-thirds of the bill—and received one-third of the service; while ward patients received two-thirds of the service and paid one-third of the cost; and that the cost of operating a patient-day in the ward was only ten per cent less than the cost of a patient-day in private or semi-private care. The committee concluded that none of the hospitals have ever charged enough for ward care to cover average costs, and that all hospitals have always reported caring for ward cases at a monetary loss.

Ward rates ran from nothing up to four dollars a day. The semi-private rates averaged four dollars and sixty-five cents per day—just a trifle more than sufficient to pay for ward care; while private patients' rates ran from seven and one-half a day up to fifteen dollars a day, and even higher. The committee points out that these high rates helped to offset in part the loss on ward patients—but it also believes that the private patient makes an unwarranted contribution to the cost of care of ward cases, and suggests that the costs of public charges should be made on the entire civilian population through some form of taxation. This would offset the cost of service to indigent patients and so enable the hospital to reduce charges for private rooms and for semi-private service.

The committee feels that the private patient assumes an undue portion of the burden of financing the voluntary hospital, and calls for a deter-

mined effort to force municipalities to pay fees for the care of indigents commensurate with the actual cost of ward care.

Reimbursing Voluntary Hospitals in New Jersey

Reimbursement of voluntary hospitals in the State of New Jersey from municipalities for the care of indigent patients runs from nothing to the actual cost of service, and it is often limited to the dollar and seventy-five cents a day received by the municipality from the State Commission to help pay for such cases. The problem, therefore, is that spread between nothing that we get from indigent patients to, let us say, four dollars and a half—the average cost of ward care; or the spread from the dollar seventy-five a day paid by the State Commission of New Jersey, to the four dollars and a half.

The sooner we get down to fundamentals and see that we are running a business—a business with all the humanity we can put in it—the easier it will be to overcome our problems.

Certainly when a voluntary hospital in a community steps in and assumes a burden that otherwise would have to be assumed by the community as a whole, it is offering a real service to that community. And a community paying for the hospitalization of its poor is nothing new; it has been done for generations and generations in that way, and is still continuing. But in the past few years municipalities have had their financial difficulties just as have the hospitals, and the taxpayers have not wanted to pay taxes any more than the ward patients have wanted to pay hospital charges.

And so after it has become increasingly difficult to obtain from these governmental or municipal units the funds that are necessary, every one of us who has a keen interest in making our hospitals go, sits up and takes notice when along comes A Great White Father in far away Washington who tells us that the great National Services in Washington are going to open their doors to us and take care of all of us, and take all our worries away. Of course that is an exaggeration.

The Voluntary Hospital Is Not Doomed

Dr. Joseph W. Mountin is quoted as saying that there is not any question about whether or not the voluntary hospital can fit into the picture, but that the point is where and how it is going to fit in. But nevertheless, the prospects of a horde of bureaucrats descending upon us all over the hospital field is something that, taken in conjunction with our present difficulties, might well make some of the less assured members of our group ask this question with some emphasis: Is the voluntary hospital doomed?

Of course it is not—and it may well be that we are over-emphasizing the whole situation because of this increment of deficit over income which I have pointed out exists. Somebody has said in effect: "The difference between happiness and unhappiness is the difference between spending ninety-nine cents out of the dollar and saving a cent, and spending a dollar and one cent and being in debt a cent." And so it is with that little increment of debt—that twelve cents out of the dollar that we are talking about, as evidenced by the State of New Jersey.

Now where is that twelve cents coming from? I have pointed out the need of getting it. Where is it coming from, and how is it going to influence the operation of our hospitals?

In the first place it is coming from where it always has come from—from the public funds. Since it is coming from public funds, is it coming from some national grant as in the case of the United States, or is it coming from some Dominion-wide grant, as in the case of Canada? Or is it coming from the state units, or the provincial units, or the county units, or the municipal units?

"Stand-By" or "Readiness-to-Serve" Charge

I know some people say: What do the hospitals care where this money comes from, as long as they get it? My answer is: they do care—they care very, very much. It has been my privilege for a good many years to sit as a member of that committee of the Orange Memorial Hospital which makes arrangements with five different municipalities. We have an arrangement which works fairly well—only fairly well. First, from some of the municipalities we get what we call a "stand-by" charge—that is what it amounts to.

Those of you who are in business or who are working in administration in the hospital field, know that even though you may have your own water system and your own power system, you may wish to be connected with the general power company or the general water system for purposes of emergency or for extra power or water. For the privilege of being connected, you have to pay what is called a "stand-by" charge—a "readiness-to-serve" charge. Now we—as a voluntary hospital engaged in serving a community—feel that we too are entitled to a "readiness-to-serve" charge—a "stand-by" charge, from that community; and some of the communities which our hospital serves do pay us a "readiness-to-serve" charge, in addition to reimbursing us, as far as

their means will permit, for the care of their indigent patients.

The rate set for the hospital to bill the municipalities was three dollars a day, which again is less than the four dollars and a half average cost —and indeed is less than half that, since some of the municipalities are having the same trouble that we as hospitals are having, and only pass along to us the dollar seventy-five they receive from the State Financial Assistance Commission. But on the whole our system has worked pretty well.

Handling Monies Due from Municipalities

Each month the trustees received from the finance committee a monthly statement with the headings, cash in bank, bills payable, accounts receivable—and so on. We only put down the amount of money owing us from the municipality when we had actually collected it. But some smart man or woman changed all that, and now we have a place in our accounts receivable to put down all the money owing us from the municipalities, and we have arranged so that we can borrow from the bank on those assets before we actually get the money from the municipality—we discount those accounts and we make a saving that way, and it makes collection very much easier, too, because we have the amounts right in our books. On the whole, our system has served our community very well.

But now the municipalities are pretty well broke, and the states are not very flush either, and there is an idea abroad in our land that we must not think for ourselves any more. We must not tackle our own problems any more! We have only to rely on some great divine giver that can make up for all of our financial shortcomings and do all the things we have not been able to do, and smooth the way so that no efforts will be called for on our part hereafter. It is all rubbish . . . but that is the idea abroad in the land; that it does not make any difference any more where the money comes from, as long as it keeps coming. Let it come from Washington, or let it come from Albany—let it come from Trenton, or Toronto, or Ottawa, or any of our state or dominion or provincial capitals.

All right. If it must come from there, let it come; but let it come from there through the smallest local municipal body that exists, because just as you get better government in the smaller communities, where you bring the government down closer to Mr. and Mrs. John Citizen, so in this question of financial assistance to the hospitals you are going to get the best attention and control when you get this very necessary assistance from the smallest governmental units possible—from your town, from your city; and not from your county, your state capital, or from Washington; and when, if necessary—if your individual community cannot carry its share of the burden—let it be supplemented by Government or state funds.

Governmental Assistance Need Not Entail Governmental Control

In all of our discussions, particularly when we come to the question of what is going to happen in our hospitals because of this need of governmental assistance—which I have tried to point out has existed for a great many years—we bring up the bugaboo that it will interfere with the administration of the hospital and it is going to bring politics into the hospital. It has not in ours, not one bit. I do not see why it should.

Because I have talked like a "brass tacks" businessman and tried to emphasize the point that we should think of the hospital as a business, is no reason why public-spirited men and women should let down. Not one of us will ever forget that deep in our hearts every one of us is interested in the humanitarian aspect of hospital work. Whether we make our living from it because we are on a pay roll, or whether we have dedicated our lives to it like the Sisters and many who work in the religious hospitals have, or whether we are serving as trustees in the interests of the community we must remember that we are all doing it because of the fundamental urge in our hearts to do something for the other fellow, and that urge has existed just as long as humanity has existed.

The Government program in my judgment is not going to take that out of the voluntary hospital system. It cannot take it out, because there are good Samaritans everywhere; and I plead guilty of being an optimist to the extent of saying that has always been so and will always be so, and should be the basis of our faith.

But we must not let optimism blind us to our shortcomings, and that brings us to the point that has been raised: that there is a general attitude to regard our voluntary hospitals as not being charitable institutions. I have tried to point out why they cannot be purely charitable institutions. The reason for that attitude does not rest so much in whether they are able to give free ward care or whether they have to refuse free ward care, but rather rests in the fact that we have to pile the bill on the paying end everlastingly, in order to get money to offset our deficits. And if out of our discussion of national health plans we can create an interest in the problem so that there will come a realization of the need of tax funds to supplement the income of the voluntary hos-

pitals, and if out of that, those who are responsible for the policy of our voluntary hospitals will take those funds to level off our charges, we will not be so vulnerable to the charge that we are making the private and semi-private patients pay through high rates for the service given in the wards.

I am not concerned about the immediate future. I am concerned, however, as every one of us must be in these terrible days of world-wide stress and turmoil, in the continuance of interested groups of people who are willing to give of themselves and of their means to get together in a hospital program without being orientated by some greater force. But every time I get to thinking about that, and every time I get to thinking about the terrible turmoil that is going on in the world today, I just come back to the fundamental that after all we are our brother's keeper, and that generally we are doing a pretty good job, but we all want to do a better job. If we welcome governmental assistance to aid us in rendering help, but never permit Government to control us, then we can be assured that the voluntary hospital will go on to do even bigger things than it is doing today.

Meeting of the Association of Western Hospitals and Western Conference of the Catholic Hospital Association

The Association of Western Hospitals and the Western Conference of the Catholic Hospital Association will hold their meetings at the Biltmore Hotel, Los Angeles, California, April 8-11, 1940. These two associations have arranged social gatherings, a program on technical subjects, and other interesting events which will attract and entertain the hospital people of the Pacific Coast and mountain states.

The Catholic Hospital Association Conference will open on Sunday, April 7, with Solemn Mass at St. Vibiana's Cathedral, Los Angeles, with The Most Reverend John J. Cantwell, D.D., Archbishop of Los Angeles, presiding.

The theme of the Conference will be "The Spirit of Hospital Service." The program will continue on through the seventh and eighth, and will merge into the program of the Association of Western Hospitals, opening on Monday, April 8, with a general assembly in the Biltmore Bowl.

Among the more important subjects to be discussed either by prominent authorities or in panel discussions are "Catholic Ethics and Modern Trends," "Guidance in the School of Nursing," and "Safety Mindedness in the Hospital."

Monday's sessions will close with an address by the Reverend Alphonse M. Schwitalla, S.J., president of the Catholic Hospital Association, on "The Hospital of Tomorrow."

Tuesday morning the topic will be "The Spirit of Hospital Service," and the opening speaker will be The Reverend Paul R. Zwilling, president of the American Protestant Hospital Association. The Tuesday luncheon speaker will be James A. Hamilton, president of the American College of Hospital Administrators. The Tuesday afternoon topic will be "Institutional Policies," and the speaker will be Dr. Fred G. Carter, president of the American Hospital Association.

Wednesday morning the topic will be "Building Esprit de Corps," the speaker will be James A. Hamilton. The afternoon topic will be "Building Good Will," the speaker will be Dr. Benjamin W. Black, president-elect of the American Hospital Association.

The Thursday morning session is turned over to Dr. Glenn E. Myers, president-elect of the Association of California Hospitals. The topic will be "Looking Into the Future." The speakers are Raymond D. Brisbane on "The Hospital Plant;" C. Rufus Rorem, Ph.D., on "Hospital Service Associations;" and Howard Burrell on "Legislation." Dr. Fred G. Carter will be Panel Forum leader.

During the convention week the following sections will hold meetings:

Dietitians
Purchasing Agents
Nurse Anesthetists
Auxiliaries and Volunteers
Physiotherapists
Pharmacists
Medical Record Librarians
Public Hospitals
Accountants
Executive Housekeepers
Medical Social Workers

The American College of Hospital Administrators will hold their luncheon meeting on Tuesday, April 9.

The Los Angeles Conference is staging a very complete and inclusive technical exhibit, participated in by eighty or more leading manufacturers or purveyors of hospital supplies in the country. This exhibit from the standpoint of educational and practical value will be one of the features of the convention week.

The Importance of Spiritual Work for Hospital Patients

RT. REV. MSGR. THOMAS J. O'DWYER

THE recognition of the importance of spiritual work in hospitals is a happy sign. It is indicative of a growing appreciation in many fields of endeavor that the depths of man cannot be tapped by scientific means; that there are resources in human beings that can only be discovered and utilized by addressing the soul.

Physicians speak of the morale of a patient. They know that one patient may have a greater chance of physical recovery than another because he has a more optimistic, or more courageous, or more patient attitude than the other patient. This morale, this attitude of the patient cannot be understood through laboratory tests, or induced by drugs.

Relaxing Peace Through Spiritual Counsel

Many patients are bound to die. And yet they hunger for life. We all hunger for life. But we all wish to see, if possible, a meaning to our existence, and if we can see none, our last days are apt to be days of utter horror and despair at being cut off from life. Ministers, rabbis, and priests know what it means to a patient to feel that he is on the brink of a wider life, a truer life, a deathless and eternal life. They know that a relaxing peace can come over such a patient under spiritual counsel, so much so that, if there be any possible chance of recovery, the patient will recover. Tensions, fears, panic, are all deterrents to recovery, and help to beget fevers or frictions that augment the fury of a disease and weaken the resistance. There are critical moments when inner struggle or panic is almost fatal, when the patient needs most of all to conserve energy. This energy is hard to conserve if the soul is not calm.

Chaplains Collaborate With the Physicians

Hospital chaplains are thus not only necessary in the matter of preparing patients for probable death, but in collaborating with physicians in doing all that is possible to heal the patient, the whole patient, body and soul. Virtually all physicians recognize that various neuroses, psychoses, hysteria and insanity itself evidence the effect of an unhappy soul upon its temple, the body.

Hospital administrators, who appreciate the value of providing spiritual care in their hospital service, are to be commended for their vision, in this day of complex material problems in operating hospitals. As Bishop Edwin P. O'Hara of Kansas City recently put it, in addressing a group of nuns engaged in hospital service, "The very multiplicity of means is almost overwhelming. Finance, equipment, and technique, each with its multiform subdivisions; personnel problems; educational standards; professional, industrial, and labor relations, and conditions; governmental aids and hindrances, all oblige you to constantly recall and keep fresh the motives that caused you to enter hospital work, which was that of ministering to the sick as to Christ Himself."

Duties of the Hospital Chaplain

The duties of a hospital chaplain are generally recognized as threefold: to visit patients, to minister especially to the dangerously ill and the dying; and to conduct religious services in a chapel for the members of the hospital personnel and for those patients able to attend.

The hospital chaplain should keep before the staff members in the hospital the high significance of their profession, and the sacred worth and dignity of their patients. This is very necessary as the years pass by, because it is only too easy to become calloused to the pain and the needs of patients, even those approaching death.

The Author

● **Rt. Rev. Msgr. Thomas J. O'Dwyer is the Director of Catholic Hospitals, Archdiocese of Los Angeles, California.**

Presented at the Arizona Hospital Association, Phoenix, Arizona, February 3, 1940.

We have all heard the story of the sophisticated young doctor who had no religion himself, and who ordered that no one, including the chaplain, be permitted to disturb a dying patient.

We have also heard of the occasional nurse who says, "I am going up to see that tonsillectomy in Ward 5," or "That appendectomy on the third floor gives me a pain in the neck," or "I am having an awful time with that gastric ulcer who came in yesterday." One would never know she was referring to Mr. Henry Jones, or Miss Sally Smith, or Mrs. Mary Brown. One can only imagine how Mrs. Brown would feel if she heard herself referred to as "that gastric ulcer."

Obviously, an occasional address to the staff by a chaplain would not be amiss, in view of those all too human tendencies.

The Hospital Chaplain's Visits to Ex-Patients in Their Homes

There is another function of the chaplain that should be more encouraged, and that is the visiting of ex-patients in their own homes, or in rest homes, or convalescent homes. If he has collaborated all along with the physician in helping patients get their minds off their illnesses, and become more cheerful and hopeful, he should remain with each case as long as the doctor does.

It must not be forgotten that the majority of patients have a great deal of faith in a priest or a clergyman; and that a chaplain can do much to get a patient to obey the orders of doctors and nurses which seem irksome, but which must be followed if the patient is to get better.

The Need for More Hospital Chaplains

Many hospitals need more chaplains than they have. The chaplain should spend considerable time with a difficult patient, such as a patient who is in the throes of self pity or alarm concerning his condition, in order to convince him that he must bear sufferings patiently; that every cross borne willingly, becomes lighter and easier to carry than the cross one resists. The chaplain can emphasize the purifying and ennobling value of suffering; that suffering should make the patient ever afterward more compassionate towards others; that the patient should emerge from the hospital with deeper vision, and finer warmth through having entered the brotherhood of suffering.

The chaplain is in an ideal position to develop in the minds of the patients faith and trust in the work of the doctors and nurses. He can point out the humble heroism of nurses who give loving care to the sick, year in and year out; and he can, in an impersonal way, discuss the skill and high ethical standards of the doctors.

The democracy of suffering of pain, and of death are difficult to understand by rich and poor alike. The chaplain can show how suffering burns away nonessentials. And the wealthy and the poor can come to realize the high worth of those simple gifts of God which they had never valued when well—a good mind and a good body.

In everything that I am saying, I am assuming that a hospital chaplain possesses the specific qualifications of intelligence and temperament which are necessary for any person to have who desires to be of service to the seriously ill. A chaplain should not be an unrealistic Pollyanna whose one formula is to say "Smile!" He should treat each patient as an individual, and with great tact and insight try to penetrate the "front" the patient may be using to hide his real reactions to the situation in which he finds himself. Books and magazines provide excellent material through which to become acquainted with the patient and his needs. There is a place for light, comic books and magazines in the sick room and there is a place for serious reading and reflection. There is a sacred grandeur in the last days or weeks of life on earth. A Bible and other books dealing with the deepest significance of love and suffering and death, and life eternal will bring to the patient hope and courage. The chaplain should aim, in an unobtrusive way, to guide the reading of various patients according to their individual need at the time.

The Functions of the Chaplain Are Primary

A chaplain who merely rushes by, or stands in a doorway to a sickroom and utters a few cheerful bromides, is a detriment rather than an asset. He creates the impression that he is in too much of a hurry to stop and enter into serious concerns with the sick person. Of course, sometimes he has so many persons to see that he can allot only a minute or so to each one. This is pitiably inadequate. A chaplain's visits should not be hurried. He should not stand by a sickbed, but should sit down for a dignified visit. He should call on the patient regularly. He should realize that his function is not secondary or incidental, but primary, and even more important than the doctor's in the scale of Divine values. At all times he must realize that both his services and the doctor's are necessary for the patient.

A human creature is body and soul. For instance, you would not say of a friend "his soul thinks." You will say "he thinks." You will not say "his body is attending a meeting." You will say "he is attending a meeting." Thus, hospitals should minister to the whole man. Moreover,

it is Christ's teaching that in the final reckoning the soul is the more important, and that spiritual issues are always primary, even if it is part of a chaplain's duty to attempt in all ways to restore physical health.

Thus, it is proper that every year medical research should flourish, that hospital standards be improved, and new technique of surgery be developed, but all this must complement the interest in the whole man, body and soul. As in a biblical analogy, we always need hard working Marthas, but we also need Marys, who will discern the essential thing, the face of Christ in the patient.

In the Tenth Chapter of the Gospel, according to St. Luke, you will recall that Our Lord chided Martha, saying, "Martha, Martha, thou art careful and art troubled about many things: But one thing is necessary: Mary hath chosen the best part, which shall not be taken away from her."

This, I think, is the Christian philosophy in the care of the sick. This philosophy obviously indicates the importance of the chaplain's function.

The New Wesley Memorial Hospital

The Trustees of the Wesley Memorial Hospital of Chicago have announced that the construction of the new hospital building on the Chicago campus of Northwestern University, the foundations and sub-structure of which were finished two years ago, will proceed this coming spring. This building has been made possible through the generosity of George Herbert Jones, one of the trustees of the hospital, whose gift will amount to more than three millions of dollars. The members of the Building Committee are Mr. Jones, Mrs. Walter J. Jarratt, M. Haddon McLean, James S. Kemper, Dr. Raymond W. McNealy, and F. J. Thielbar. Thielbar and Fugard are the architects.

The hospital will represent the very last word in hospital design and construction. It is to be twenty stories high and have approximately 525 beds. It will be the first unit in a group of buildings being planned by the Wesley Memorial Hospital Trustees, which will be known as the George Herbert Jones Hospital Center. The hospital will have facilities for the care of charity patients, but there has been a decided effort made by the hospital authorities to design the hospital so that it will offer the finest of care and accommodations to persons of moderate means. It has been felt that the rich and poor have both been better provided for than the so-called white-collar patient.

New Wesley Memorial Hospital

Much study has been given to the development of the new hospital as a community health center. Lectures by the staff members will be given to professional groups and at regular intervals distinguished speakers from other hospitals and other cities will assist the staff in lectures to the lay public. The new hospital will retail all of the virtues of the early nursing home type of hospital, but will have in addition all of the latest improvements in diagnostic and treatment facilities. Wesley Memorial Hospital is affiliated with Northwestern University College of Medicine and it is the purpose of the donor and the Board of Trustees to make it a community center from which will emanate knowledge concerning advances in medical science.

Hospital Records in Court

Assembly Bill 330, introduced in the New York Assembly by Assemblyman Boccia, provides that records of hospital certified by officer in charge may be read in evidence in any court and shall be prima-facie evidence of facts stated therein; declarations of nonmedical nature or which are explanatory or descriptive are not admissible. *Referred to the Codes Committee.*

Nurse Anesthetists Meet

The Southeastern Assembly of Nurse Anesthetists will meet with the Southeastern Hospital Conference at Edgewater Park, Mississippi, March 28-29.

The Georgia State Association of Nurse Anesthetists will meet at the same time with the Southeastern Assembly of Nurse Anesthetists.

Effect of the Present Trend of Specialization on Hospital Administration and Service

BENJAMIN W. BLACK, M.D.

THE present trend in specialization is but evidence of the conspicuous advances that have been made in recent years in medical education; marked by improvements in methods of teaching medical students and their continued education after graduation. Medical schools have given a vast amount of fundamental knowledge in the branches of medicine, but it has been an accepted fact that the practice of medicine cannot be learned through the use of text-books and from lectures. The individual contact with the patient is so vital that if the student is to gain ability to apply scientific facts in the treatment of his patient, he must learn much that the medical schools have not been able to give.

Because educators and medical students have realized this trend, the internship was developed and it has been regarded in some medical schools as a continuation of the curriculum—the number of such schools is in the minority. In fifty-two of the medical schools last year, an internship was not required for graduation, indicating that those schools regard it as a phase of graduate experience rather than undergraduate education. This is but an indication of the presence of a variety of types and character of internships provided by the various hospitals of the country. Such experience and training offered by hospitals often seem to lack any standard of purpose and have been largely organized for instruction as determined by the hospital concerned.

The Functions and Methods of Graduate Medical Education

Excellent studies have been made of undergraduate education in medicine, but up to this time there has been no comprehensive analysis of the functions and methods of graduate education. The Commission on Graduate Education, which has been making such a study, will soon present a report; a study that will prove a vital and instructive analysis. Its conclusions relative to the broad subject of intern training, as well as graduate and postgraduate education, will exert a definite influence on hospitals, as it defines the functions and methods of each, the conclusions reached, and the suggestions to hospitals looking towards improvement.

Presented at the Western Sectional Meeting of the American College of Surgeons, Los Angeles, California, January 29, 1940.

The Author

● Dr. Benjamin W. Black is the Medical Director of the Alameda County Institutions, Oakland, California, and President-elect of the American Hospital Association.

Our Present System of Intern Training

The present system of intern training has not only been the subject of commendation but of criticism as well. Young physicians have looked back upon their internships with satisfaction only when that period of "exposure" has given them the necessary instruction, training, supervision, and direction which seemed best to meet their own purposes. There has been no agreement as to the type or the proper length of time of internship. Out of seven hundred and twenty-nine hospitals approved for intern training by the American Medical Association, five hundred and seventy-eight have internships of one year's duration, while twenty-six are of eighteen months, and eighty-four are of two years or more. The type of internship has varied, many offer rotating services; twenty-seven offer straight internships in medicine, twenty-six in surgery, thirteen in pediatrics and fifteen in pathology.

Too frequently the internships have neither educational nor practical content and fail in the accomplishment of the purpose of training required by the young physician to begin the practice of medicine. It has been frequently but little better than a poorly paid position for services that could be performed by a well trained orderly. The function of an internship is to round out and give practical application to the course completed properly in the medical school and also to accustom

the student to assume responsibility for the care of patients under the direction and supervision of his superior on the staff. It becomes, at the same time, a final year of preparation for the practice of medicine for a majority of young men who do not expect to specialize, but who plan to engage in practice immediately. The internship has been planned to present an opportunity for direct relationship of physician and patient, and also to permit the intern to learn the various techniques. Such an internship has found neither time nor place in many hospitals for the introduction of special postgraduate studies in basic sciences.

Components of Adequate Intern Training

It is proposed by the Commission, that the adequate internship of the future must include these definite components—not losing sight of the best qualities found in the internships of the past:

1 It must be regarded as a part of the basic preparation for either beginning the general practice of medicine or as a preliminary step to advance training in a specialty.

2 It must provide a real educational experience and a period of clinical responsibility under supervision.

3 It must be an important responsibility of the staff, and the intern must be under the direction of those members who are competent to provide the necessary instructions.

4 It must be a joint responsibility of the medical school and the hospitals that provide a satisfactory fundamental preparation for medical practice.

The Residency

The term residency now means progressive and graduated experience to enable a physician to make himself proficient in a special field of practice and to give him the educational background for continued development in this field.

Training in the specialties is of increasing importance, as the present organized program of certification for specialists has developed. Examining boards have now been organized in all of the principal clinical specialties and are made up of their representatives and the corresponding section in the American Medical Association. An Advisory Board has been organized to coordinate the work of the committees which cooperate with the Council on Medical Education and Hospitals of the American Medical Association. It is composed of representatives of the individual examining boards: the Association of American Medical Colleges, the American Hospital Association, the Federation of State Medical Boards of United States and the National Board of Medical Examiners. The elements existing in the certification program include demonstrations of competence before the examining boards and the provision for suitable centers for training in the specialty field.

The American Hospital Association has recognized these trends and has already recommended that all hospitals give special consideration in the development of organized clinical departments in charge of those who have demonstrated competence through recognition by certification. The best prevailing opinion is that reorganization of staffs, when such is necessary, should take place by evolution, in keeping with the increased availability of specialists who have demonstrated competence, as expediency may suggest and when local circumstances require.

Residencies with Adequate Educational Content

From these trends there has been given a strong impetus to the setting up of residencies with adequate educational content. The internship, while designed to train men for general practice, must at the same time lay the basis for further study for those who may desire to enter a specialty. The one must remain closely associated with the other and when the content of each has been considered and clearly defined, it will be less difficult to differentiate the internship from the residency. For the hospitals that offer either or both, a planned service must develop that will give the most value and offer opportunity for study and practice.

There will, of necessity, be a similarity in preparation for an internship and the residency, so that no abrupt change in direction of graduate education shall follow. The American Medical Association in a recent statement indicates that there exists a relative shortage of interns and some hospitals are faced with the problem of the employment of second year interns in the capacity of general residents. Other hospitals have found it advantageous to discontinue the internship entirely. A further consideration of this entire situation, with complete information concerning responsibilities and their implications, will define for the hospitals what constitutes a paid position on the staff, with the proper designation and title, for a young physician who has completed his internship and assumes a residency without full educational content, but looking towards proficiency in practice.

The Need for More Residencies

It is now generally agreed that the acceptable training in the specialties will be reserved for residents, fellows, or other graduate students pursu-

ing courses acceptable for such graduate education. An acceptable program for the future must be predicated upon the provision that a sufficient number of residencies are satisfactory from an educational standpoint. Realization of this need for more residencies has grown rapidly, as evidenced by an increase of one hundred per cent or more in the total number of residencies offered during the past nine years; an increase from two thousand twenty-eight residencies to four thousand fifty-six, and during the last five-year period there is a five hundred per cent increase.

After the year 1942, all of the Specialty Boards will require a residency of three years as a prerequisite to admission to examination. They declare also that considerable time and emphasis must be placed upon exposure and instruction in the basic sciences as applied to the treatment of patients. It must be assumed that many of the hospitals now offering a residency will be unable to offer all of the graduate work required, and it may be necessary that shorter residencies be combined and properly integrated with medical schools and other hospitals, so that educational opportunities are available. This will permit added opportunities to meet the requirements and educational demand. It is estimated that about thirty thousand specialists are required to meet the needs of the people in this country today. The future may well bring need for more specialists, resulting from public demand and the growing complexity of diagnostic and therapeutic techniques. To accomplish this, the residency must follow a carefully prepared program affording the resident increasing experience and responsibility.

The resident himself must present the required qualifications having to do with cultural and educational background, genuine ability and eagerness to acquire knowledge. The selection for these residencies is of some concern and will be of increasing moment as the hospitals meet these additional demands.

Basic Principles of Resident Medical Education

From the best information at hand, it would then appear that the basic principles of resident medical education are:

1 The residency should be the most satisfactory method of graduate training for specialized fields of practice.

2 The residency must be organized as a real educational experience and the hospital must provide qualified teachers who are willing to assume responsibility for graduate education.

3 Preparation in the sciences, basic, to the specialty, must also be provided; as well as clinical experience, under supervision, to insure real competence.

4 The residency is a joint responsibility of medical schools and those hospitals able to provide residencies of a satisfactory educational character.

The effect upon the hospitals in connection with these trends assumes serious aspects of increasing importance. There must develop a certain degree of standard practice on the part of the hospitals to give the intern a training with educational content, as well as exposure to practice under supervised conditions as he treats the patients admitted to his service. Responsible members of the staff usually serving on a voluntary basis, should be men who have met the requirements of the Specialty Boards and are qualified to teach the interns as well as to treat the patient. It means the more efficient type of staff organization with stress laid upon the various technical facilities available in the treatment and care of the patient, also the ability to instruct in the use of such facilities applied in practice.

For the residents, it not only implies that the resident is an advanced student, but it also demands that the hospital shall supply competent instructors, qualified in the specialty and skilled as educators as well, increasingly able to teach and to inspire him with the technical training and a desire to keep abreast of his specialty by perfecting himself in the basic requirements. These instructors shall coordinate the work that the resident shall perform and shall constantly expose him to fields that might be overlooked, in full cooperation with the busy staff member who gives him his time and instruction.

It can well be seen that the various hospitals, particularly those not associated with universities, that determine to engage in either intern training or in the training of residents in the specialties, must change their entire attitude toward these educational functions and must provide additional funds for them and readjust their various staffs in such a way as to meet these increasing demands. Whether the hospitals can meet these conditions depends much on future development. Certainly, it will result in more highly trained professional skill available to patients who may have the good fortune to receive treatment in the hospital with approved internships and residencies, but marked changes in the economics in administration and professional attitudes must follow. The satisfaction of engaging in real educational efforts to the advantage and promotion of greater professional skill and efficiency is a worthy objective in which hospitals will be concerned.

Planning for the Chronic Patient

E. M. BLUESTONE, M.D.

AT A TIME when chronic disease has not yet been adequately defined to the satisfaction of everyone in the hospital field, and, particularly, when the willingness to face this subject is by no means universal, we must define our terms carefully for the guidance of those who are interested in planning for the chronic patient. This statement will confine itself to the care of the chronic patient inside of an institution and omit the arrangements for the extra-mural services.

The Author

● Dr. E. M. Bluestone is Director of Montefiore Hospital, New York City.

Basic Factors Upon Which Any Plan Depends

Any plan for chronic patients that we shall elaborate will depend on certain basic factors. Broadly speaking, we deal with three types of institutions, exclusive of mental hospitals, for the care of the sick; acute general and special hospitals; chronic hospitals; and custodial institutions. Patients who are admitted to the acute general and special hospitals—the aristocrats of the hospital field—are short-term cases. These patients are generally in the younger age groups and their cases are more urgent and more stimulating clinically than those of the chronic patients. They have a favorable prognosis in the majority of cases, and a comparatively high curability and low mortality rate. It is also significant that the economic status of these patients enables them to make a proportionately large contribution to their care in the hospital. Patients who are admitted to the custodial institution require care for only residual physical disabilities and handicaps which could be managed at home, if the conditions there are satisfactory.

We are concerned here with hospitals which care for patients who suffer from chronic disease and who require indefinite periods of intensive hospitalization for active medical and nursing care. These patients are long-term cases not very interesting clinically—in many cases, a stalemate between attacking agent and defending organism has taken place, in spite of the particular doctor who happens to be treating the case—generally in the older age groups, with a less favorable prognosis in the majority of cases, and a comparatively low curability and high mortality rate. Again, it is significant that these patients are able to contribute only a small fraction of the cost for their care in hospitals.

The Chronic Patient a Humanitarian Obligation

If chronic patients generally were more acceptable to the visiting staff and could make a larger contribution toward the cost of their care in the general hospital there would be fewer transfers of these patients from acute general hospitals to chronic hospitals and to custodial institutions, which may indeed be grouped together for all practical purposes. While we must admit that the financial investment in the rehabilitation of the chronic patient is not as good as it is in the case of the acutely sick patient (the per diem cost is greater for the acute patient but the final cost is greater for the chronic patient because of the long duration of his illness) at the same time we must recognize that the chronic patient is a humanitarian obligation, apart from the challenge which he presents to the scientist. There should not be a double standard of scientific care, one for the acute patient and one for the chronic patient.

The Relationship of Chronic Diseases to Scientific and Social Programs

Chronic disease bears a definite relationship to scientific and social progress. The incurable patient of yesterday may be the curable patient of today. Chronic disease brings us into a field which is expanding in possibilities as the span of life increases, the conquest of the infections progresses, and the communal worker, philanthropist, and physician enter with their contribution.

Integrating the Care of the Chronic Patient and the Acutely Ill in the General Hospital

The author has argued elsewhere*, on numerous occasions, that the best way to plan for the chronic patient is to integrate his care with the care of

*"Chronic Disease—A Problem in Phitanthropy," Bulletin of the American Hospital Association, July 1935

the acutely ill patient in the general hospital scheme. A chronic section in a general hospital is less expensive to maintain than an independent chronic hospital. Chronic patients require the same diagnostic and therapeutic facilities, at least, as are now provided for acute patients in general hospitals. Where there is selective interest by the medical staff, adequate scientific facilities and perhaps paid service, the rights of the chronic patient can be safeguarded. The "dumping" process, the isolation and segregation of chronic patients at a distance is inhumane because the chronic patient is an uncompleted scientific problem. Furthermore, there is great moral as well as scientific value in an integrated social, medical, educational and research plan. The chronic patient is far more closely related to the acute patient than he is, on the other hand, to the custodial type of patient, with whom he has thus far been generally grouped, at a great loss to himself, to the community, and to the field of medical science. The natural history of disease should be studied from infancy to old age in all of its phases, acute, chronic and "incurable," in a group of buildings which may be physically set apart but which are maintained under a unified social and administrative plan.

The independent chronic hospital has only one important excuse for its existence, provided it possesses all of the facilities of an acute and chronic hospital which its patients require. This is the tendency on the part of the medical staff in a mixed hospital to concentrate interest, attention, and service on the special and compelling problems of acute disease, while the chronic patient is neglected. Independence is, however, an expensive and unnecessary luxury for a chronic hospital and it is, indeed, beyond the willingness or ability of philanthropy to maintain. For reasons already stated, almost all chronic patients are located, after much wandering, in public hospitals and other types of institution where the taxpayer carries the entire burden. These institutions are mostly in the custodial classification and generally neglectful of their responsibility to both science and humanity. There is only one important example in existence of an independent voluntary hospital for chronic disease and that is the Montefiore Hospital in the City of New York, an exceptional illustration of humanitarian and scientific interest in the social and medical problems of the chronic patient, created out of the unwillingness of acute general hospitals to retain long-term patients or provide for them as overflow in a section specially devoted to their needs. When the general hospital having accepted responsibility for the care of the patient transfers him, it is a confession of inability to carry the financial burden longer, or an instinctive desire to suppress a problem which it has not had the patience or ability to solve.

Planning the Independent Hospital for Chronic Diseases

When planning an independent hospital for chronic diseases, the temptation is to locate it at a distance from the centers of population, on the periphery of the community or beyond, where it is inaccessible to patients, their families, the personnel and the visiting staff. The site here is less expensive but the problem recedes correspondingly into the distance. Because of the scientific nature of chronic disease, the patient requires all of the diagnostic, therapeutic, and other special facilities which are available for the acutely sick patient in a general hospital. He does, in fact, need more, since such forms of therapy as physical therapy and occupational therapy have their greatest opportunities for usefulness in chronic disease. Under the mixed general hospital scheme, patients can be accurately placed under a careful plan of organization, so that the facilities of the acute section can be made immediately available to the chronically sick patient. In an independent chronic hospital all of the facilities of the acute general hospital must be duplicated, besides additional facilities. A patient occupying a bed in an independent chronic hospital requires about two-thirds of the cost of maintenance which prevails in acute general hospitals. If the chronic patient were part of the mixed hospital plan this cost could be substantially reduced.

The Hospital Section for Chronic Disease in the General Hospital

There are a number of considerations in the construction, equipment, organization and administration of a hospital section for chronic disease which must be borne in mind. Unlike the acute general hospital, the buildings for chronic patients should be built low and have spacious grounds. They should be connected by sheltered passageways to facilitate the movement of patients for all purposes. Because nursing service for the chronic patient is not quite as urgent as it is for the acutely sick patient, the chronic section may be spread over a larger area without loss of efficiency, as long as the chronic patient does not get out of focus. Corridors should be provided with railings for the guidance and hand support of ambulatory patients and should be wide, to facilitate wheelchair and bed traffic which is more pronounced in the chronic section.

Doors should be wide in bedrooms, and in all rooms used by patients, to permit the easy passage of beds and wheelchairs. An emergency room need not be maintained in the chronic section if the

integrated plan is adopted. Under the mixed plan all of the follow-up work can be done in the outpatient department of the general hospital. A small custodial section is desirable as part of the general scheme, both for the purpose of rounding out the idea of a true medical center and as an intermediate department between the section for chronic disease and the patient's home.

The acute section will consist mostly of bedridden cases. The chronic section will house ambulatory, semi-ambulatory, and bedridden cases to meet the fluctuations between these various stages of mobility which characterize chronic disease. Since many chronic patients spend a large part of the day away from their beds, outdoors and in special therapy departments, it is not advisable to plan the vertical type of construction for them. Because of the large number of wheelchairs in the chronic section, wheelchair garages should be provided in strategic locations. The provision of sanitary conveniences must take into account the complete helplessness of the acutely sick patient and the partial helplessness of many chronic patients.

Entertainment Provisions for the Chronic Patient

For reasons which have already been stated, more liberal provision of entertainment facilities must be planned for the chronic patient. Schoolrooms and other educational facilities must be provided, because these patients stay for longer periods of time. For the same reason and because of the clinical quality of chronic disease, adequate research facilities must be provided. While it is inadvisable, generally speaking, to plan large wards, they may be somewhat larger in the chronic section than in the acute section. Patients in the chronic section lend themselves better to the dormitory type of hospitalization as long as their scientific needs are met. Additional space for resting and sleeping outdoors, such as balconies, verandas and porches, should be provided liberally in the chronic section. More locker space must be provided. Children suffering from chronic disease should be treated as a separate problem from the standpoint of hospital construction, since there is more possibility of contact with adults in the chronic section than in the acute section. Such homely activities as a canteen, where patients can do shopping of a minor nature, a barber shop, and a small tailoring establishment must be kept in mind.

The Equipment for the Chronic Section

As far as equipment is concerned, the problem is simplified under the integrated scheme. The chronic section will, of course, require additional wheelchairs for semi-ambulatory patients and less portable scientific equipment, since many of the patients will be able to report for diagnostic or therapeutic work in special departments. Provisions will have to be made for such items of equipment as air and water mattresses. Mechanical appliances will be more in evidence and so will a dental department, since patients will remain for longer periods of time. The latest model of adjustable bed should be furnished, particularly for patients suffering from cardiac and respiratory disease.

In planning the medical organization, we must recruit a visiting staff which will have selective interests in the various categories of chronic disease and divide their time equitably between both sections. Since every case of chronic disease is a complicated problem in pathology, and since the patient is under control over long periods of time, the best medical minds in the community should be assembled for a concentrated attack on the various clinical problems which these patients present.

A plan of medical work for the acute and chronic sections should be arranged on the same principle that nursing work is distributed—in sufficient amount and where the need is greatest. The controlling influence in the assignment of the medical staff will, however, be the interests of the scientist himself. One could, of course, buy medical service for the chronic patient—you will never see a doctor turn away a paying chronic patient from his office—but there is no form of reward that is comparable to the provision of laboratory and other facilities where students of chronic medicine can spend part of their day working out the difficult and complicated problems which they are bound to find here.

Every worker in a hospital for chronic disease must be cautioned against the discouragement which naturally results from a slow response to treatment. Special methods of financing must be planned in advance because of the inability of the chronic patient to contribute more than a small fraction of the cost of his maintenance. We have learned from experience that it is inadvisable to establish private pavilions for chronic disease alone, since the duration of illness of these patients seems to be inversely proportional to the size of their pocketbooks.

Not only medical research, but medical education finds a great field of usefulness in the section for chronic disease. The ability of the philanthropist, nurse, doctor, social worker, and lay employee to plan and care for the chronic patient is the acid test of their humanity. The communal worker is at his best under the mixed plan where proper emphasis can be given to the care of both the acute and chronic patient.

Compiling State-Wide General Hospital Statistics in New Jersey

EMIL FRANKEL

THE New Jersey Hospital Statistics Reporting System, inaugurated as a cooperative enterprise between the New Jersey Hospital Association and the New Jersey State Department of Institutions and Agencies in January, 1929, looks back to ten years of highly useful and successful work.

Details of the original system were worked out in 1928 by a Committee consisting of Dr. George O'Hanlon, Jersey City Medical Center; Fred W. Heffinger, Mercer Hospital, Trenton; and Emil Frankel of the New Jersey State Department of Institutions and Agencies, and received the ready approbation of Dr. William J. Ellis, Commissioner of the New Jersey State Department of Institutions and Agencies.

Schedule for Monthly Reporting

The items included in the schedule for monthly reporting were those that any hospital should be able to furnish without great labor and yet when compiled would have the data essential for comparison. In order to make these hospital statistics of the greatest practical value, it was considered desirable that they be promptly reported and compiled so that the data might be available for comparative studies as soon after the close of the month as possible.

Recently, the forms used originally have been revised with the cooperation of the Committee on Accounting and Statistics of the New Jersey Hospital Association and with hospital administrators cooperating in the hospital statistics service.

Members of this Committee consist of the following: LeRoi A. Ayer, Cooper Hospital, Camden; I. E. Behrman, Beth Israel Hospital, Newark; Frank B. Gail, West Jersey Homeopathic Hospital, Camden; Dr. Ralph J. Glover, Associated Catholic Charities, Newark; F. Stanley Howe, Orange Memorial Hospital; Ivor Jones, Welfare Federation of Newark; Col. Charles R. Lloyd, Morristown Memorial Hospital; W. Crane Lyon, Hospital Council of Essex County, Newark; Dr. George O'Hanlon, Jersey City Medical Center; W. Malcolm MacLeod, Elizabeth General Hospital; E. F. Schultz, Christ Hospital, Jersey City; Charles H. Young, Mountainside Hospital, Montclair; and Emil Frankel, Chairman.

The Author

● **Emil Frankel is Director, Division of Statistics and Research, Department of Institutions and Agencies, Trenton, New Jersey.**

The blank to be used beginning with January, 1940, is reproduced herewith:

PLEASE RETURN TO:—
DIVISION OF STATISTICS AND RESEARCH
DEPARTMENT INSTITUTIONS AND AGENCIES
TRENTON, NEW JERSEY

HOSPITAL SERVICE SUMMARY FOR THE MONTH OF ..... 194....

Name and location of hospital.....

1 In-Patients Admitted and Total Patient Days

	Type of Patient	Number Admitted During Month	Patient Days Rendered During Month
A	Total—All In-Patients (B + C)	.....	.....
B	New Born Infants	.....	.....
C	Total Adults and Children.....	.....	.....
	Classify as to type of care:		
	1 Private patients	.....	.....
	2 Semi-private patients	.....	.....
	3 Ward patients—Private ..	.....	.....
	4 Ward patients—General ..	.....	.....

2 Total Receipts from All Patients
- a—Receipts from in-patients ... $.....
- b—Receipts from out-patients... $.....
- c—Total ..... $.....

3 Receipts from Ward Patients..... $.....

4 Current Operating Expenditures..... $.....

5 Out-Patient Department (excluding item 6)
- a—New out-patient admissions..... .....
- b—Total out-patient visits ....

6 Accident or Emergency Room Visits..... .....

7 Normal Bed Capacity
- a—Beds ....
- b—Bassinets ....
- c—Total ....

Signed .....
Title .....

Date .....

Instructions for Recording the Data

1 In-Patients Admitted and Total Patient Days

A Total—All In-Patients: The sum of items B and C

B New Born Infants: Include only those newly born

in this hospital and DO NOT INCLUDE Still Births.

Infant Patient Days rendered during month: Cover only infants newly born in this hospital who remained for continuous treatment until (but not longer than) discharge of its mother. IF infant remains after the discharge of its mother, or, if during the stay of its mother becomes a pediatric patient, such subsequent days care rendered should be classified with those of "Adults and children" (C and its subdivisions 1, 2, 3, or 4).

C Adults and Children: Include all adults and children, other than New Born Infants. The total of items 1, 2, 3, and 4.

1 Private Patients: Those occupying single rooms, paying the full hospital charge for same, and having their own attending physician.

2 Semi-private Patients: Those occupying rooms having two or more beds, paying full hospital charge for same, and having their own attending physician.

3 Ward Patients — private: Patients receiving ward care, having their own attending physician.

4 Ward Patients—general: Patients receiving ward care, and receiving free medical and surgical services by the hospital medical staff.

Patients receiving complimentary care or a discount by the hospital should be classified according to the accommodation in which care is given.

CALCULATION OF IN-PATIENT DAYS, FOR ANY ONE DAY:

To the midnight census at beginning of day add one patient day for each admission and deduct one patient day for each discharge during the day; to this total add one patient day for each patient who has been both admitted and discharged during the day.

2 Total Receipts from All Patients: Comprise the current operating receipts for care of all in-patients and out-patients, including room and board and special charges, whether paid by the patient himself or by his financial sponsor. INCLUDE all payments made by benevolent or mutual benefit societies, or for compensations, or liability insurance cases, or under hospital service plans, etc. DO NOT INCLUDE federal, state, county or municipal aid whether rendered as lump sum or for individual patients; receipts from Community Chests and charitable contributions; or capital receipts.

3 Receipts from Ward Patients: Comprise payments made by or on behalf of private and general ward patients by the patient himself or his financial sponsor. DO NOT INCLUDE payments made by federal government, state, counties, municipalities, public relief offices, etc., or payments for free services out of charitable contributions or income from endowment funds.

4 Current Operating Expenditures: Comprise expenditures made for direct care of in-patients and out-patients. INCLUDE all special services such as x-ray, laboratory, ambulance, etc., and fees or commissions paid by the hospital to roentgenologists or other specialists. DO NOT INCLUDE (for the purpose of this report) charges for depreciations, interest payments on mortgages or on capital loans, taxes or payments for any capital expenditures.

5 Out-Patient Department (Exclusive of accident and emergency room visits reported in item 6)

a—New out-patient admissions: The number of individuals making a visit for the first time in this calendar year to the Out-patient Department, not to any one service of the Out-patient Department.

b—Total out-patient visits: Comprise the total number of visits to the out-patient department during the period under consideration. If an individual receives several services on the same day whether in the same, or separate divisions of the out-patient department, a visit should be recorded for each service.

6 Visits to Hospital Accident or Emergency Room are to be listed here separately and excluded from out-patient services.

7 Normal Bed Capacity: The number of beds and bassinets normally provided for in-patients. DO NOT INCLUDE beds set up because of an emergency or an unusual demand for in-patient services. Normal bed capacity ALSO SHOULD NOT INCLUDE those beds used during temporary period of diagnosis or treatment, such as x-ray, physio-therapy, basal metabolism tests, those in the labor or emergency rooms, or those used for domiciliary purposes by medical staff, nurses, other employees or visitors.

The figures resulting from the monthly hospital statistics reporting system have been utilized in many ways both by the individual cooperating hospitals and by the Department of Institutions and Agencies in depicting the work of the general hospitals in New Jersey.

Annual summaries, in which the monthly figures are combined, are compiled and distributed. In addition, statements giving long-time trends in general hospital services and how they have been influenced by social and economic changes have been prepared.

In 1934 the New Jersey Hospital Association and the Committee on Accounts and Statistics aided the Department of Institutions and Agencies in conducting a general hospital survey which was to secure the basic information upon which plans for hospital support were to be formulated by the State Emergency Relief Administration, and a body of authentic hospital information to be made available to form the basis for general hospital development.

The body of hospital statistics accumulated has been used in a study of the organization and operation of general hospitals in this state made by the Committee on Hospital Relationship of the Medical Society of New Jersey. The inquiry had as its aims the improvement of relationship between the governing, administrative and professional staffs; and the improvement of the efficiency of the service rendered to patients.

In a hospital survey by the Committee on Hospital Facilities of the Governor's Health and Welfare Conference, the facts gathered by the Division were used to give a picture of general hospital services in New Jersey. This study will be used as a basis for the further development of such service in New Jersey.

The Administrator's Influence on Intern Training

JOHN R. HOWARD, JR.

THE administrator's influence on intern training in the hospital is not unlike that of a father's influence on child training in the home. A great deal depends on the character and personality of the "head of the house." I shall not attempt to describe methods of parental training, educators and psychologists and columnists have contributed volumes on this subject, but I would like to point out that the principles are just as applicable in adult training as in child training. Pleasant environment and good personal example in just dealings, kindly interest, and willingness to consider another's opinion are basic requirements for training in good personal or professional habits.

The interest of the administrator in his interns begins with his provisions for their physical comfort and for safeguarding their health. Pleasant rooms, comfortable beds, good nourishing food—and plenty of it—and time and facilities for recreation are needed by these boys who have been under great stress while going through medical school and are feeling the pressure of making good during their internship. Physical examinations are not enough. They need positive provision for their comfort and relaxation. A sluggish body makes for a sluggish mind. Such interest by the administrator is a vital factor in the development of esprit de corps, and greatly reduces occasions for discipline.

The Administrator's Influence on Professional Training

How far the administrator's influence on the professional training can go depends on his relationship with the medical staff, both organic and actual. He is responsible for the conduct and attention to duties of interns, just as much as he is for that of nurses. At times this conflicts with the ideas of the medical staff, as in the case of an intern favored for his ability or other reasons. This happens with nurses, also. The final result will depend upon the administrator's relationship with his Board of Trustees; but if his relationship with the medical staff is what it should be, conflicts will never get that far.

The Author

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The Responsibility for the Selection of the Interns

The selection of the interns is the joint responsibility of the medical board and the administrator. While this may not appear in the By-Laws, the administrator—as representative of the governing board, which makes the appointments—must share the responsibility, and the more clearly he appears to do so, the surer his subsequent control. In our hospital, the intern committee of the medical board and the superintendent select the interns and meet with them as a group, shortly after their arrival, to give them a few principles and to voice interest in their service and training.

The Assignment to Services

The assignment to services, what we might call the bedside training, and the special medical conferences or courses, are, of course, in the hands of the medical staff. The administrator cannot do much about the bedside training. Its value varies, on different services and with different members of the staff. Fortunate is the hospital with persons on each service who take interest, time, and pains in the daily instruction of the interns on their services. All the administrator can do about it is to encourage such interest.

Special courses or conferences for the interns should originate with the medical board. In our hospital, we have a committee of the medical board to arrange such courses. Lacking this, it is the responsibility of the administrator to interest the medical staff in the project. He should also make sure that the interns are coached in the importance of necropsies and in methods of obtaining them, and see that interns are notified when necropsies are to be done, and that they at-

tend them when possible. A further responsibility is provision for medical journals and reference books.

While responsibility for medical histories should lie with the medical staff, the administrator has a definite responsibility, and oftentimes the main responsibility, for seeing that they are properlly written. Interns should have early instruction and continuous supervision in the writing of histories. Not only is this vital to the maintenance of proper records, but it is a particularly effective medium of medical education, and of life-long value to the intern.

The Intern and the Patient

Another aspect of the interns' training in which the administrator should take part is the human side of sickness and of hospital care. Interns are apt to come from medical schools with a vast interest in disease, and not much knowledge of or experiences with human beings. Their interest is in serious conditions, and ordinary ills are given little thought and minimum attention—they take time from more "interesting" cases. This is the time to point out to the interns that experience with ordinary ills and with human behavior is essential to the success of their future practice. Until they see an individual human being when they look at a patient, and feel that knowledge of home and occupational background is essential to diagnosis and treatment, they will not experience the satisfaction that comes with real success. For this last, the interns should be coached in how to use the social service department. While lectures by the head of the department are helpful, more will be learned by following through on individual patients. The social service workers should be instructed to give particular attention to this phase of their work.

The Intern's Role in the Admission and Discharge of Patients

In relation to the human side of hospital care, the administrator should give particular attention to the admission and discharge of patients, making sure that interns learn that the physical condition of the patient is not the only governing factor; that it is sometimes necessary to admit patients because of home conditions, that a patient coming for treatment in the night should be admitted more readily than one coming in the day; and that patients who are ready for discharge must often be held until there is a suitable place to receive them, or some one to accompany them.

I have not attempted to say of what the interns' training should consist. I have merely noted some of the aspects of it to which the administrator should give particular attention.

When it is considered how much the graduates of our medical schools still have to learn through practical experience, and how many of them go out from our internships to become the sole medical advisers of patients, the responsibility of the hospitals for their training is an important one. This responsibility is one of the greatest the administrator has. Too often he neglects it. Interns come and go so rapidly, that it is easy to procrastinate. But this rapid turnover makes it all the more simple to start improvements. The medical staff will be sure to be responsive; the governing board will be quick to see its importance; and no investment of time and effort by the administrator will yield more satisfying results.

A New York Court Decision

Failure to File Additional Notice of Lien Within the Time Limit Deprives Hospital of Lien

A New York law provides that no lien on recoveries or settlements, received by a person injured through the fault of another, shall be granted a hospital in which the person was treated unless written notice of it is filed in the office of the appropriate county clerk "prior to the payment of any moneys to such injured person." The law also provides that in addition to the preliminary notice of lien just referred to a hospital must also file in the county clerk's office "within five days of the discharge of any injured person, an additional notice of lien, duly verified, which shall show the total hospital charges which have accrued and no lien hereunder shall exceed this amount."

The Society of New York Hospital filed a preliminary notice of a lien prior to receipt by the injured person of any moneys in settlement of his claim for the injuries for which treatment was given in the hospital. The hospital, however, did not file the additional notice referred to until seven days after the injured person was discharged from the hospital. In the opinion of the supreme court, appellate division, first department, New York, with two judges dissenting, the failure of the hospital to file the additional notice within five days after the patient's discharge from the hospital deprived the hospital of its lien on the settlement received by the patient.

Melichar v. *Michelson, Application of Society of New York Hospital* (*N.Y.*), 9 *N.Y.S.* (2*d*) 1017.

Institutes

HELEN ROBINSON

MY attendance at two institutes for hospital administrators has enabled me to approach the subject of institutes from a practical and somewhat personal viewpoint; therefore, I will present what I think I have gained by attending these institutes and what their influence has been on my administrative work.

In order to understand a subject in its widest interpretation, it is logical to give the reason for its existence. For clarification and emphasis, I will discuss: (1) the need for institutes; (2) the institute itself and its aim; and (3) the practical application of ideas gained by attending institutes.

From the publicity that has been given to institutes for hospital administrators in hospital magazines for the past seven years, it will not be necessary to go into a detailed discussion about the meaning and history of the ones held in the past. We all know that these institutes were developed as refresher courses for hospital personnel, and to make it possible for administrators isolated in small communities—or isolated in large communities, which is quite possible—to exchange ideas and solve common problems.

Training Personnel in the Small Hospitals

The hospital today, particularly in the small community, must accept the responsibility of training the nonprofessional hospital personnel. It is the difficult, expensive, and tedious method, and the administrator must be the director of this training. The many ramifications of the hospital set-up along with the rapid progress in the medical and scientific world have so complicated and multiplied the duties of the hospital administrator that it has become impossible for any one person to supervise all hospital departments. Therefore, the need of some means to aid the administrator in training his personnel as well as himself became a necessity—consequently, the establishment of institutes was inevitable. The progressive administrator today will use institutes in this light. Instead of putting his employees through long years of training through experience, each year, he will designate certain key persons in his organization to attend an institute, thus establishing a chain of responsibility in his hospital whereby his attention can be given to more vital problems.

Presented at the American College of Surgeons' Sectional Meeting, New Orleans, Louisiana.

The Author

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The significant feature about institutes is that the progress they have made has been brought about not by a group of picked individuals but by the participants themselves—each class leaving new suggestions and criticisms for a better institute to follow; even the weather and food come in for their share of criticism. Through this medium of development a plan of this kind cannot fail to serve the purpose for which it is intended.

The Institute and Its Aim

The Chicago Institute organized in 1933, and held each year since, might be called the "Mother Institute." Being held in Chicago, which is the center for organized medical service, it is no doubt the major institute. From it has sprung the "sectional institute." Each has a definite place in the hospital field—the major institute presenting problems of a broader scope, national problems and educational problems; the sectional institute, geographical problems, similar in nature to other hospitals in the same section. The sectional institute fits well into the administrator's program of personnel development. It is usually closer by miles to the hospitals in a given section, and the time consumed in going and coming is shortened.

An alert administrator must not only know his own sectional problems but he must also have a broader scope of the entire hospital field. The Chicago Institute serves its purpose in this re-

The 1939 Institute held at the University of Chicago

spect. Chicago, being the national headquarters of the American College of Surgeons, the American Medical Association and the American Hospital Association, it is the key city where the latest developments in the medical and hospital field are tested. The Chicago Institute arranged into lectures, round tables, special studies and field trips to various hospitals gives the person attending every opportunity to study any phase of his organization. To hear a discussion about a problem and then actually see it demonstrated in a hospital affords a first-hand knowledge of it which cannot always be so well obtained through reading articles in magazines.

The problem under discussion might be carried out in a certain way in one type hospital and in a different way in another type hospital, all depending upon functional conditions; a centralized system of food service in one hospital versus a decentralized system in another; cafeteria service versus table service; centralized linen control versus decentralized control; a unit system of admission versus a new number for each admission; and many other comparisons. The student sees the method or procedure under discussion in operation from every angle and is better able to assimilate the knowledge when he undertakes to apply it to his own organization.

Institute Field Trips

It is an unprofitable undertaking to visit a hospital at any time expecting that some troublesome situation can be solved from such a visit upon talking to a department head. Visitors are numerous in hospitals and employees always busy. At an institute the hospital program is carefully planned by each department head to present the important details so that the student can easily grasp the important factors and through his own questions he is able to see a well organized picture of the entire department. The aim of the entire institute program is to fertilize the brain with new ideas or to give new approaches to old ideas. When the student leaves he has stored in his mind a multitude of ideas on which he can draw from time to time when the occasion demands that he solve a problem.

The attendance at an institute should pay dividends in the practical application of ideas obtained. Upon the utilization of these new thoughts depends whether or not your hospital will progress or remain at a standstill.

On July 1, 1939, I found myself, along with other department heads, facing a tremendous reorganization program; increasing the bed capacity from 125 to 285 beds; changing from a small city hospital to a large state hospital; a wider public relations program; an extensive building program; exact specifications for new equipment; the employment of additional personnel the majority of whom I knew would be inexperienced in hospital work; all this to be accomplished on a limited budget. I needed a reserve supply of comparative ideas in order to solve the many perplexing problems that confronted me. I took advantage of the 1939 Institute in Chicago last September to aid me in this undertaking. Limited time does not allow me to go into detail about all the various things that arise in a reorganization. By attending the Institute I have been able to inaugurate new plans which have improved our service to the point that it has been noticeable to every employee concerned.

Seeing Is Believing

Movable dressing carriage—For a practical application of an idea obtained through attending a demonstration in a central surgical supply room at one of the hospitals visited I will submit the following example:

Almost all hospitals have as standard equipment on the surgical ward a Barnes Type of Dressing Carriage. We had two. To my knowledge they had stood in one place on the floor for many years. As a movable dressing carriage they were not practical because with the open top and bottom articles placed on them would not remain stationary while the carriage was pushed into the ward. They were serving merely as tables on which to place surgical supplies—and $50.00 or more is rather an expensive table for such use. At the demonstration in this one hospital, one of these dressing carriages had been renovated into a useful piece of equipment which could be fitted up for fifteen or twenty dressings and pushed into the ward at the fixed time for doing dressings. And here is how it was done.

The maintenance man welded a narrow bar parallel to the bar at one end of the carriage and about four inches from the end bar. In this space a hemmed unbleached muslin strip the same width was tied. In the muslin, holes were cut and bound for placing bottles, thus keeping them from turning over and falling off the carriage. At the other end of the carriage the same procedure was followed for the holding of assorted sizes of adhesive tape. A lock was placed on this bar so that adhesive could not be removed. This leaves ample space in the center of the top of carriage for utility jars. The open space at the bottom was enclosed with galvanized tin which was enameled white. This was arranged in

The 1939 Institute held at the St. Louis University, St. Louis, Missouri

The 1939 Institute held at the Columbia University, New York City

partitions so that a different compartment was available for the various supplies needed in dressings. In the renovation of our carriage an additional convenience was added by welding on a telephone extension on which was welded another square iron frame to hold an instrument tray for the convenience of the doctor in handling his instruments.

Our dressing cart is in charge of one floor nurse who sets it up every morning for twenty dressings; once a week everything is taken off the cart and cleaned. The nurse requisitions supplies from central supply and is held responsible for returning them. The cart is compact, everything is stationary and it can be pushed into ward with everything intact on it.

The unbleached domestic muslin bottle holder gives space for six bottles; 1 bottle—250 cc. merthiolate, one—250 cc. 5 per cent mercurochrome, one—250 cc. bottle bathing alcohol, one—3 oz. bottle 10 per cent solution silver nitrate, 1 bottle 3 per cent gentian violet and a forcep holder. In the center top is placed one—6 qt. utility jar of folded sponges, one—6 qt. jar of 3 yd. rolls for wet dressings, one—2 qt. can for small folded sponges, one—2 qt. can of cut gauze, 1 can of sterile tray covers, 3 small jars of irrigating sponges. The compartments in the enclosed lower section of carriage hold abdominal pads, catheter trays, extra pacts of sterile instruments, bandages, towels, etc.

The cost of renovating amounted to $22.50 and it was done in the maintenance department. Perhaps this illustration of the practical application of an idea is not new to some persons, I probably would never have thought of it. Observing its operation at the institute enabled me to apply it to my own institution. I have never seen a cart in any catalogue that answers this purpose.

This one idea obtained at this hospital has revolutionized our dressing procedure. Previous to this arrangement, the nurse or helper went to the surgical supply for each dressing as needed and the doctor waited her return. Under the new method the time of both is saved; a fixed time is set for dressings and the service has been improved. Every few days a doctor or intern will ask me when another one of the dressing carriages will be available.

Cleaning Materials—I saw demonstrations of cleaning where cleaning was an art and the employees doing this type of work were interested in the results obtained. This work had been put on an educational basis to these employees. It was not drudgery to them, but another essential phase of hospital administration.

Control of Surgical Supplies—Through visiting a number of surgical supply rooms at different hospitals I have completely changed our method of control and have placed more articles in the supply room which, formerly, were kept on the floors.

Training Help Through Placards and Posters—Increasing bed capacity means the employment of additional help throughout the hospital. As a general rule, the orderlies and kitchen help are drawn from the local community and all are inexperienced in the routine of hospital work. Patience is required in their training. In one lecture the speaker suggested the use of placards or posters in picture form in putting ideas across because workers are able to retain more quickly what they see. This is especially a good idea for the kitchen help. This method aids in starting a new routine in the hospital. It alleviates the continuous reminding of employees for their forgetfulness in carrying out the new routine. The posters on display keeps the new way constant in front of them and they have no excuse to offer for their forgetfulness. It also serves as a means to test the employee as to his interest and observation in his work.

Serving Meals to Employees—A large hospital means the serving of more meals to employees and the exact number of meals served must be known in order to arrive at dietary statistics. When we move into our new kitchen and dining room, I intend to suggest to the dietitian the use of meal cards for all employees; different colored cards for the number of meals to be served to the different classes of employees. It is impossible for one person behind the serving counter to watch that one employee does not eat any more meals at the hospital than he is allotted. I saw this system worked to great satisfaction at one of the larger hospitals visited.

In Closing

The ideas presented here are representative of hundreds which are obtained by attending an Institute and which can be applied in every institution. There is one point I would like to bring out in closing, and I believe that, above all others, it is the most important. The attendance at an institute does something to me. I leave with confidence and it instills in me a greater enthusiasm in my work. I go home with a new impetus to do bigger things. It is a professional tonic to attend an institute and hear both men and women, leaders in the hospital field, discuss their phase of hospital work in an intelligent manner; men and women who know the work through long years of experience and study and who are giving something back to the profession they represent in order to keep the standards high and assist others to do likewise.

I think institutes are a permanent part of our hospital organization. Their future development depends upon you and me, and what we are able to give them to aid in constructive future planning.

The 1939 Institute held at the Duke University, Durham, North Carolina

Recent Developments in Hospital Service Plans

C. RUFUS ROREM, Ph.D., C.P.A.

THIS paper summarizes the experiences and lessons of the past year in the development of hospital service plans. Many of the events and problems are presented in greater detail in the various committee reports, hence will be described only briefly in this paper.

The Author

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Enrollment

During the year 1939, the enrollment of approved non-profit hospital service plans grew from 2,900,000 to 4,500,000 persons. This increase exceeded the enrollment for 1938 but did not reach the goal of five millions predicted at the beginning of the year.

The number of approved plans has increased to 56, with approval granted to those with headquarters in the following cities during the past year: Denver, Colorado (state-wide); Alton and Rockford, Illinois; Louisville, Kentucky; Baton Rouge, Louisiana; Portland, Maine (state-wide); Detroit, Michigan (state-wide); Kansas City, Missouri; Durham, North Carolina; Canton, Cincinnati, Columbus and Youngstown, Ohio; Philadelphia and Wilkes-Barre, Pennsylvania; Providence, Rhode Island (state-wide); Winnipeg, Manitoba (province-wide). The year ended with three additional state-wide plans getting under way with headquarters in Des Moines, Iowa, Dallas, Texas, Milwaukee, Wisconsin.

Public Character of Hospital Service Plans

The theory and fact of hospital responsibility was tested during 1939 in such manner as to demonstrate clearly the public character of hospital service plans. At least three plans all organized under special enabling acts, called upon the member-hospitals to make adjustments in the payments receivable from the plans in order to guarantee service to subscribers. In no instance were the subscribers deprived of any benefits to which they were entitled under the contracts, and in each case, the experience led to improvements in enrollment procedures and control of admission which were consistent with the rates and benefits offered to the public.

Enabling acts for nonprofit plans were passed in the 1939 legislatures of 13 states and one Canadian province. They were: Connecticut, District of Columbia, Iowa, Maine, Michigan, New Hampshire, New Mexico, Ohio, Rhode Island, South Carolina, Texas, Vermont, Wisconsin, Manitoba. A Florida bill applied to Hillsborough County only, of which Tampa is the county seat. The Iowa, Michigan and Wisconsin acts were passed after similar bills had been defeated in 1937.

Meetings to Discuss Policies and Administration

Service plan directors held a number of regional meetings during the year to discuss policies and administration. These were in Atlantic City for the seaboard states, Roanoke for Virginia, and the Carolinas, Providence (for New England), Chicago—two sessions (for the Mississippi Valley). In addition, state-wide meetings of the plans were held at Syracuse and Albany for New York, and in Harrisburg for Pennsylvania.

A meeting of state insurance department actuaries was held in New York City, with representatives from Connecticut, New York, New Jersey and Pennsylvania. Present also were representatives of the Commission and the Council. The National Association of Insurance Commissioners has delegated its "committee on blanks" to prepare a uniform financial and statistical report for non-profit hospital service plans. The committee proposes to consult with representatives of the Commission and Council and to consider the recommendations of their committees on accounting and statistics.

Presented at the Conference of Hospital Service Plans, Pittsburgh, January 24, 1940.

Rural enrollment has continued to hold a place in the interests of executives, although the number of rural subscribers has not grown materially. The crux of the problem (aside from the necessity of a low subscription rate) appears to be the development of a convenient and economical method of collecting subscriptions which will avoid the high percentage of cancellations usually attendant upon individual enrollment and direct payment. The extension of state-wide plans to small cities will, it is hoped, suggest better methods of reaching the farm population, possibly through grouping on a geographical basis, rather than place of employment.

A Significant Development

A significant development of the year was the establishment of a formula for group insurance for hospitalization expense offered by commercial companies. The formula runs approximately as follows: the monthly premium will be 15 cents for each $1.00 daily indemnity for board and room service for 31 days in any one illness, plus 5 times the daily indemnity as an allowance toward special services. Thus, a subscription rate of 75 cents monthly would provide an allowance of $5.00 per day plus $25 "for extras." The rate varies upward when there are more than 31 per cent of female employees or colored, and the group insurance is available to relatively large employed groups enrolling in high percentages through payroll deduction, where the employers contribute towards the costs. There is not the same uniformity in respect to family coverage, and the rates for dependents do not compare favorably with the offerings of nonprofit plans.

Service Plans for Low Income Groups

The trustees and delegates of the American Hospital Association reaffirmed at Toronto a resolution passed at the 1938 convention, recommending the extension of hospital service plans to include medical services during hospitalization for the low income groups. The medical profession was invited to confer on methods by which this could be accomplished. No such plans have been developed but several ventures into the field of low-cost hospital plans occurred during the past year.

Ward-service plans for family coverage have been offered at Buffalo and Cleveland for several years, at rates of approximately $1.50 per month per family. This rate has been adopted by other midwest plans for full dependent coverage in wards or part-coverage in semi-private accommodations.

The practical value of still lower rates for liberal, but partial, dependent coverage had been demonstrated since 1935 in the $1.00 monthly family rate in Minnesota and the $1.30 monthly family rate in Rochester, New York.

Near the end of 1938, the rapidly growing Pittsburgh plan broke away from the standard $1.50 family rate, with a full-coverage ward service plan at rates of 60 cents, $1.00 and $1.25 monthly for the employed subscriber, husband and wife, and family respectively. By January 1, 1939, the Boston and Toledo plans announced similar rates and benefits, with hospitals to be paid approximately $4.50 per day of care.

The benefits were receivable in the minimum class of room accommodations, but the subscribers were entitled to the services of private physicians of their choice among the profession entitled to staff or courtesy privileges in each hospital. The Boston plan, which was limited to stated income groups, permitted subscribers to receive staff-service in the public wards, if otherwise eligible for free professional care. The Utica plan offered the low rates of 48 cents, 74 cents and 91 cents monthly for subscriber, husband-and-wife, and family, for more restricted service in the wards and required dependents to pay $1.00 per day while hospitalized. Experience of each of these four plans has shown the ward rates to be sufficient to reimburse hospitals adequately and to provide allowance for operating expenses and reserves.

Several other plans may be said to have entered the low-cost field: Rockford and Louisville have full-coverage family rates of $1.30 for semi-private service; New Orleans now charges $1.20 for liberal family-coverage. Winnipeg has adopted the Minnesota schedule of half-coverage for dependents on a $1.00 monthly family rate, but permits ward-care with free medical attention upon payment of a maximum of $1.00 per day while the dependent is hospitalized. The Kingsport, Tennessee, plan, at $1.00 per month per family has recently expanded coverage so that dependents pay a maximum of $1.00 per day while under care.

The New Haven plan permits the semi-private plan subscribers to receive free medical care in wards, provided they are unable to pay fees to private physicians. In Rochester, such subscribers are accepted into semi-private rooms for free care, and changes are under discussion which would permit low-income subscribers to receive hospitalization and free medical care in wards, instead of hospital care in semi-private accommodations.

Suggestion for Low-Cost Plan

Although the American Hospital Association has endorsed hospital plans with medical service, I believe that we must push immediately into the low-cost field, even without medical fees, if voluntary hospital service plans are to reach proportions which will affect national trends in health service. The following argument explains my point of view.

Service plan executives and hospital administrators cannot and should not "urge" the inclusion of clinical fees, in the face of opposition or indifference by the medical profession. Moreover, many well-informed trustees are unwilling to urge the expansion at present, particularly since they are wrestling with problems in administration of the present benefits.

Pressure for a compulsory health insurance will continue during the next few years. Meanwhile, I believe, widespread coverage providing complete hospital care by well-administered plans will have more influence in governmental planning than ideally more complete plans including medical care which are in the process of formation or discussion.

Semi-private plans seem to be approaching the point where continuous rapid growth cannot be expected, although they may extend from the present 4,500,000 to a total of 10,000,000 in several years. Large concerns are already registering strong demands for experience ratings. Because the majority of plans have been unwilling or unable to develop special rate structures for large accounts, a number of such groups (Sears, International Harvester, Youngstown Sheet and Tube, General Electric Company) have instituted hospital benefit plans for employees or have incorporated hospital benefits in existing employee mutual aid societies. Other large groups have enrolled with commercial insurance companies under cost-plus contracts, mainly because of national coverage but partly because of price.

Commercial companies cannot, of course, offer benefits through other than an indemnifying contract. The service-contract and family-coverage features of non-profit plans appeal to both employers and employees. If minimum service benefits, rather than semi-luxury benefits, were offered to low-income groups, they would be attractive even without medical care. A low-cost plan uniformly applicable throughout the country, with reciprocal arrangements among plans, would go far to meet the needs of large national firms.

A low subscription rate justifies the establishment of enrollment percentages and procedures which tend to minimize "malingering," and make maximum benefits possible. A family rate of $1.00 or $1.25 would suffice to pay hospitals $4.50 or $5.00 per day, amounts which are in excess of the ward per capita income of almost all voluntary hospitals. Such payments would regularize or increase hospital revenue, even if they do not pay the full per capita costs at present percentages of occupancy. It is assumed, of course, that any plan which does not pay hospitals their full cost would be limited to low-income groups and subsidized, if necessary, from philanthropy or taxation.

A low-cost plan without medical fees could be started without the participation of "all" voluntary hospitals. Availability of benefits in half the better hospitals of a city would be sufficient "freedom of choice" for nearly all subscribers. In western and rural areas, such a plan would reach new groups of the population immediately, since the wards are served by private physicians who are paid (or not) according to the circumstances of individual patients.

Undoubtedly the exclusion of clinical service benefits would make a low-cost plan less attractive to low-income groups in the cities. It might even be argued that such a plan would help the hospitals more than the potential subscribers, some of whom now receive free hospital and medical care. But "price" is important, and many low-income employees would subscribe, provided they were not automatically made ineligible to receive care from staff-service physicians.

A low-cost plan would not disturb any staff relationships. It would merely increase the number of paying cases in the staff or private service wards. Patients could be permitted, but not required, to pay their private or staff-service doctors.

Conclusion

What conclusions may be drawn from the experiences of 1939 and previous years? They can be expressed in the following terms:

1 The guarantee of service by the member-hospitals imposes an obligation for sound administration upon the executives and trustees of hospital service plans.

2 The insurance principle is not magic. Hospital service plans do not create buying power; they merely apply it in a rational manner to the purchase of hospital care.

3 Non-profit hospital service plans are not intended for the indigent population. They should not be used to finance the "free service" of hospitals, nor should enrollment policies permit special groups of individuals to receive excessive benefits at the risk of limiting services to the entire group.

4 Abuse of privileges can be prevented most equitably when enrollment is accomplished rather than when hospitalization is requested. An enrollment policy which reduces adverse selection among the subscribers will permit an admission policy which reduces adverse decisions among hospitalized cases.

5 The existing low-cost ward-service plans have been self-sustaining, to an even greater degree than semi-private plans. This has resulted from the custom of insisting upon payroll deductions with attendant higher percentages of enrollment; also the fact that membership has been drawn from a different cultural level.

6 Individuals will not insure themselves against risks they otherwise do not bear. There is no reason why a low-income employee should pay subscriptions to assure services which he will, in any event, receive free or at less cost to himself. The introduction of plans for the low-income groups must be accompanied by equitable adjustments in the admission policies and staff relations of the wards of voluntary and government hospitals.

7 Hospital service plans are not in competition with private insurance companies. They seek a different objective. Private companies indemnify policyholders for stated economic losses at time of hospitalization; the expenses beyond the indemnity are not a responsibility of the company, but they still rest upon the patient and the community. Hospital service plans are designed to guarantee necessary hospital service to employed persons with low incomes; the insurance principle merely provides an equitable distribution of the risk of economic loss and reduces the burden upon the individuals and taxpayers.

8 Well-administered nonprofit hospital service plans for the low-income groups may go far to answer the pressing demands for compulsory health insurance. They would permit the American people to budget hospital bills, which are always hard to pay, on a basis which exemplifies the principle of cooperative self-help without political control, and which retains the values inherent in private medical practice and hospitalization.

The New England Hospital Association

The hospital people of the New England States will gather in Boston to attend the annual convention of the New England Hospital Association, March 7, 8 and 9. The Massachusetts Hospital Association will convene March 6.

At the opening session on the morning of March 7, Warren F. Cook, president of the New England Association, will present his Presidential Address. At the luncheon, the guest speakers will be His Excellency Leverett Saltonstall, Governor of Massachusetts, and The Honorable Maurice J. Tobin, Mayor of Boston.

At the luncheon on Friday, the guest speaker will be Dr. Fred G. Carter, president of the American Hospital Association.

Prominent among those who will address the convention are W. Frank Walker of the Commonwealth Fund, Dr. E. H. L. Corwin of the New York Academy of Medicine, Sophie G. Nelson of Boston; Clara Quereau, New York City; Raymond Sloan, New York City; Michael M. Davis, New York City; Rev. Alphonse J. Schwitalla, president of the Catholic Hospital Association; and Dr. Clifton T. Perkins, Boston.

The Detroit Regional Conference of the American College of Surgeons

The Detroit Regional Conference of the American College of Surgeons, composed of the states of Michigan, Ohio, Wisconsin and the Province of Ontario, will be held in Detroit, April 1, 2, and 3. The headquarters will be at the Statler Hotel.

This conference is one of the most important of the College of Surgeons' regional conferences held during the year, and is always one of the best attended.

Under the leadership of Dr. Malcolm T. MacEachern, associate director of the College of Surgeons, consists of real conferences participated in by those who attend and at which the leading problems of hospital construction, administration, and operation will be presented by authorities in their respective fields. In the panel discussions and round tables, those who attend the conference will have their opportunity to participate in the program and develop an increasing interest in the subjects presented.

This conference should be put on the calendars of hospital administrators and their personnel in the states and province mentioned above.

Price Trends in Hospital Commodities

McGill Commodity Service, Inc., Auburndale, Massachusetts

Sponsored by the Committee on Purchasing of the Council on Administrative Practice

WHEN all is said and done, the war is and will continue to be the dominating influence on production as well as commodity prices. In a nutshell this important phase is summed up in the following:

1 Sudden peace is still a possibility, but based on actual events to date, the European struggle still has the earmarks of a lengthy affair.

2 The type of warfare recently witnessed is not a reliable criterion of what is going to happen after the winter period is over.

3 Warfare on an aggressive scale means untold destruction. The Allies are utilizing their Dominions and Provinces to the utmost of their ability in order to protect exchange rates and preserve their investments in the United States, but obviously this country will be called upon in the course of time to supply huge quantities of munitions, finished goods, and even foodstuffs.

4 Before this struggle is ended we expect the Neutrality Act will be modified.

5 The United States, regardless of its desire to be neutral, will be forced to loan money to France, England, and the Scandinavian countries. We have found from experience that the policy of attempting to spend ourselves rich is an economic fallacy, but we are convinced of one thing, namely, that a year or so hence our prosperity will be temporarily enhanced by the heavy outgo of war materials, a substantial portion of which will be financed by our own money. As war news comes drifting in, it becomes more and more apparent that it does make some difference to the United States who wins World War No. 2.

Time goes quickly, and now more thought must be given to the possibilities of inflation. Never in the history of the world has a major war taken place without leaving in its wake distorted price levels. This war will not prove an exception. Due in some degree to conditions over which this country has no control, gold has flowed into this nation for a period of years at a rate much faster than actual production. Close to two-thirds of the monetary supply is now confined within the borders of the United States, and a peak is not in sight. We hesitate to make any comment as to what will happen after this country has successfully cornered the world's gold supply. However, it does not require a mathematician to figure out that foreign countries are handicapped by a scarcity of gold, first as regards a sound monetary system, and second, in the endeavor to establish credits to carry on international trade. War is costly, and debts are piling up despite intensified taxation. A new siege of currency devaluation and inflationary characteristics in commodity prices appears inevitable, and the first signs of the movement could easily make an appearance by the end of 1940. Of course, inflation is something that has been talked about for many years, and the word no longer creates apprehension. The war, however, has completely changed the complexion of the world monetary situation, and certainly we are not alarmists when we call attention to the fact that some radical changes in the commodity price structure are rapidly approaching.

In summary, it is difficult to visualize the consequences that are more or less inescapable following the general economic world events now being chronicled. The present status of business activity, and particularly commodity prices, is not in our opinion a sound criterion of prospective conditions over the next year or two. The recession now in effect, and which has not fully run its course, may prove to be the low point for a long time to come. With commodity prices declining, it is hard to convince purchasing agents that prices are low; in fact, thoroughly deflated. Again we would like to call attention to the important point that in mid-February the composite index of All Commodities stands 27 per cent under the five-year average prior to 1929, 19 per cent under the peak of 1937, and only comparable with 1914 and early 1915. The great bulk of the speculative advance that occurred directly after the outbreak of World War No. 2 has been canceled.

Surely, prices are not destined to work lower for an indefinite period.

All Commodities

The index of all commodities has moved steadily downward since the turn of the year and established new low ground in early February. As shown on the recapitulation on the following page, price levels for five groups now average well under quotations a month earlier. Six groups registered price strength, but the importance of price weakness more than counteracted the tendency of specific commodities to register strength. Industrial activity also moved downward, and whereas the Federal Reserve Index of output in December reached a high of 128, the January figure was estimated at 120, and even lower levels are now in effect. The latest price index stands 4 per cent above the same period in 1939.

Drugs and Chemicals

Although barbitol prices strengthened, the substantially higher index figure is almost entirely due to the further material strength in quicksilver. War psychology as well as action on the part of the European cartel to elevate prices of mercury is important. However, no actual shortage exists and excessive prices are rapidly stimulating domestic output. Meanwhile, industrial activity has subsided and there are now signs of greater competition in the quicksilver market.

Paper Products

The index strengthened as compared with early January, reflecting higher prices for tissue paper. The pulp market holds the spotlight because while there are ample supplies available at present, this does not represent the real issue. The question is, "Will warfare spread in the Scandinavian countries, thereby cutting off almost entirely supplies from this important source?" Obviously, imports which held on a high plane during late 1939 are now facing a decline. This phase must be watched carefully, but nevertheless, the paper industry has recently entered a more vulnerable position. Rapidly expanding production during the final four months of 1939 resulted in a supply which exceeded consumption. Now production is being curtailed, and there are definite signs of an element of increasing competition. Some price shifting is not unlikely.

Cotton Goods

The composite index of cotton sheetings and cotton yarns is now lower as compared with the turn of the year. Buying is now on a more conservative basis, and it does not appear logical to expect another huge buying wave during the near term such as was noted last fall. Actual consumption of cotton, which means production of finished goods, has held on an abnormally high plane for a period of five months.

Surgical Dressings

Generally speaking, price levels for plaster, sponges and napkins held fairly steady while moderate strength was reported in the price list of gauze. The magnitude of the price advance which has taken place since late 1939 tends to discount bullish forces for the present. Current price levels reflect high producing costs and fundamentally, supply-to-demand ratios are tending to weaken rather than strengthen.

Fuels

The sizable increase in the fuel index was caused entirely by higher prices for fuel oil, particularly Bunker C at New York. The fuel oil market is highly sensitive to seasonal characteristics, and prices reach a peak at the time that maximum consumption is chronicled. The advent of spring usually completely changes the statistical as well as price status. The outlook for gasoline is not at all reassuring, as stocks have reached top-heavy proportions. In regard to bituminous coal, announcement of minimum prices by the Coal Com-

McGill Monthly Price Index for Hospitals
1926 = 100

	Feb. 1932	*Feb.* 1933	*Feb.* 1934	*Feb.* 1935	*Feb.* 1936	*Feb.* 1937	*Feb.* 1938	*Feb.* 1939	*Jan...* 1940	*Feb.* 1940
ALL COMMODITIES	50.9	44.4	63.0	72.6	74.3	84.6	71.8	68.7	72.8	71.5
Drugs and Chemicals	78.6	70.9	74.7	69.4	71.4	70.3	68.9	70.1	78.1	80.8
Paper Products	79.5	69.5	77.0	81.2	80.5	83.6	98.0	90.5	89.6	92.4
Cotton Goods	44.9	41.9	88.6	87.7	73.8	95.5	69.9	72.0	85.9	82.1
Surgical Dressings	64.6	67.4	82.8	83.3	79.1	81.2	70.4	68.8	73.4	74.3
Fuels	50.3	49.4	75.4	74.3	71.1	88.5	92.3	81.3	98.3	103.3
Groceries	48.1	39.8	55.5	73.4	67.7	87.7	61.5	52.1	59.2	55.9
Meats	59.0	52.3	54.2	79.9	85.0	82.8	67.9	78.1	71.0	69.7
Fresh Vegetables	98.7	29.3	67.6	56.7	58.5	61.1	63.0	42.9	54.8	71.5
Fresh Fruits	96.6	72.1	86.5	78.6	62.8	79.4	50.6	57.2	62.0	60.6
Canned Vegetables	82.0	74.3	99.9	93.4	84.5	83.0	76.2	65.9	66.8	66.2
Canned Fruits	66.2	60.0	71.7	80.0	71.1	75.6	80.2	67.2	67.6	67.6
Dairy Products	52.4	46.6	58.1	79.0	81.4	74.1	63.8	61.1	68.2	70.8

mission will likely be postponed until the early spring period.

Groceries

Prices have declined since the first of the year, reflecting lower quotations for flour, sugar, rice, beans, coffee, cocoa, and corn oil. A check-up reveals that stocks of foodstuffs in this country are at abnormally high levels. This simply means that competition between foodstuffs will continue keen. Meanwhile, new crop prospects must be watched with greater care as growing conditions today are subnormal due to the limited amount of moisture in the ground, particularly in the wheat belt.

Meats

This import group averaged lower, which is not at all surprising in view of the heavy marketings of livestock in general, particularly hogs. During the past month the price of dressed beef has held firm to moderately higher, but in the case of lambs and pork the price structure has shown a definite disposition to weaken. As a direct result of the increased production cycle of livestock there can be no escape from a continued heavy slaughter for an indefinite period. This simply means a continuation of relatively low price levels.

Dairy Products

Inclement weather has strengthened the composite price index for dairy products, but this must be regarded as a temporary situation as fundamentally, adverse forces predominate. In the first place, there are ample supplies of butter, cheese and eggs. Two months hence production will expand along seasonal lines, resulting in a rapid increase in cold storage holdings. There can hardly be any escape from considerable price weakness during the early spring period.

The Miscellaneous Group

Fresh vegetables have strengthened and it must be borne in mind that this group is highly sensitive to seasonal characteristics. Onions, green beans and potatoes have registered strength as compared with early January. Canned vegetables weakened moderately under the pressure of lower prices for canned corn. The statistical position, however, is not as seriously unbalanced as was the case a year ago. It is of interest to note that British buying of American canned goods, especially beans, soups and tomato products, has been one of the highlights of our foreign trade during the past two months. Exports of canned vegetables to England during the six-month period ending January 1 recorded a two and a quarter times increase over the corresponding period a year earlier. As compared with a year ago, canners' stocks of the seven major vegetables are down to 47,600,000 cases from about 60,000,000 cases.

Light Beam Control for Hospital Doors

The so-called "electric eye" or photo-electric relay control has been extensively used in industry as a proven aid to production control. It has also been used to some extent for the automatic opening of doors in restaurants, garages, railway stations, automobile plants, etc., and more recently for the doors of operating rooms, thereby avoiding the necessity for any human contact in opening and closing.

The principle of application of the photo-electric cell is simply the operation of a switch by light control; an electric circuit is opened or closed by interception of a beam of light, or light is merely allowed to impinge upon the sensitive area of the photo-electric cell to initiate frictionless control for opening doors, starting and stopping conveyors, operating valves or switches for temperature control, elevator door guards, leveling of elevator, controlling electric signs, drinking fountain control and many other possible uses where automatic control is desired.

We have observed the practical application of these units in hospitals to operating rooms and diet kitchen doors and were impressed with the apparent simplicity of the equipment and the facility and quietness of operation. Under certain conditions we believe this equipment may be considered useful but it must be remembered that like all other electrical devices, smooth operation depends upon dependable electric energy and the constant supervision of an intelligent mechanic. In spite of the rather pleasing appearance of the installation and the pleasant sensation of having doors move open as one approaches, we are not convinced of the necessity or convenience of this innovation so far as operating room doors are concerned, since orderlies or nurses will still be required to move the stretchers and they may as well open the doors.

It is improbable that the use of automatically opening doors to operating rooms in any way promotes asepsis under present technique, and this has been a potent sales argument to promote the use of the equipment. However, it would seem wise and desirable that administrators should have this new control agency in mind for such applications in which automatic control is desired.

W. H. Walsh, M.D.

Dedication of the Asa S. Bacon Library

THE Asa S. Bacon Library, located in the headquarters building of the American Hospital Association, was dedicated February 12. The friends of Mr. Bacon from many states and provinces filled the Library. The simple but impressive ceremony was in keeping with the life and work of the man whom the hospital field delights to honor.

Dr. Fred G. Carter, President of the American Hospital Association, presided. The dedicatory address was delivered by a life-long friend of Mr. Bacon's, the Right Reverend Monsignor Maurice F. Griffin of Cleveland, Ohio, Senior Trustee of the American Hospital Association, who paid a fitting tribute to Mr. Bacon in the oratorical gem which is included in this article.

ASA S. BACON
President of the American Hospital Association in 1923, and for Thirty-three Years Its Treasurer

Dedicatory Address

THE RT. REV. MSGR. MAURICE F. GRIFFIN
Cleveland, Ohio

We are met to dedicate this library and service bureau in honor of one who has been most influential in its development, Asa S. Bacon. In this ceremony we would symbolize his high ideals of hospital service, and in the continuation of this activity would suggest something more than the consideration of these mere material things. We would elevate the stacks and files and equipment to the dignity of instrumentalities of a living, breathing, organism—in which a great hospital man lives on in his achievement.

More than twenty years ago, at the American Hospital Association Convention in Cincinnati, there was developed among the leading national associations interested in hospitals the theory of a conference on hospital service. The library was the first tangible result and may well be regarded as the distinct activity of this conference.

Thirteen years ago the Library was moved from the building of the Modern Hospital Publishing Company, in which it had been from the begin-

ning, and became the sole responsibility of the American Hospital Association.

The Conference is no more. The Library remains—the expression of that generous spirit of cooperation among allied associations; a treasure house of information for all; rendering service without discrimination; meeting an ever-increasing need; becoming more and more established in popular esteem as one of the most distinctive contributions to the entire hospital field made by our Association.

During all of these years, first when the Association was one of the largest annual contributors to the Conference, and second when it became the sole supporter of the Library, the financial responsibility rested continuously and heavily on Mr. Bacon, our Treasurer. In addition to his many duties, he has given to this Library, year after year from the first appropriation that brought it into being, his serious thought and careful planning. For more than a dozen years now, the problem has been to make available all of the funds necessary to retain and enlarge the trained personnel, to extend the facilities and equipment of the library, and to increase its general usefulness.

But Mr. Bacon has made a contribution more fundamental and important than that—he has made it possible for this Library to have a Home.

When the American Hospital Association had come to the cross-roads in its history, and conservatism argued for traditional programs and continued restricted activity, and enthusiasm projected an almost limitless possibility for a greatly enlarged organization—he was one of those who had faith in our Association and was willing to obligate himself for the purchase of this property for headquarters. His signature stands out on the bonds that financed it. It was his recommendation that influenced many to buy them.

Besides that, he suffered the grief of our mortgage indebtedness, when in the bank panic, impossible demands were being made upon us. At the Detroit Convention, the membership give him a most flattering vote of confidence by heavily over-subscribing a second bond issue to retire this mortgage.

Mr. Bacon's interest in our Association has been extended far beyond the organization concerns, to the members themselves. Unhesitatingly and untiringly he has been available for consultation and advice to his host of friends in hospital work. Many an institution has a better organization, a better financial standing, better staff and personnel relations because of his friendly direction.

All of this has been based on the soundest possible foundation—his own excellent experience in theory and practice in his own superb hospital.

During the long years of his superintendency he has directed one of the outstanding institutions in this country. He has seen it grown from a relatively small beginning, to its present magnificent proportions. During this time he has lived in it, and, most of all, for it. He has felt the exhilaration of planning, the anxiety of experimentation, the joy of success and recognition. His story runs from the hope of seed times to the full fruition of a golden harvest.

Kindly, understanding, appreciative—a man of few words but clear thoughts and deep convictions. Loyal to the purposes of our Association, interrupting more than a third of a century as Treasurer only to serve as President. The American Hospital Association is safe as long as it has officers as capable, as conscientious, as much interested, and as willing as Mr. Bacon.

It is eminently fitting that henceforth this Library and Service Bureau should be known as the Asa S. Bacon Library, by authority of the Board of Trustees, voted in Toronto, September 28, 1939, "in honor of Mr. Bacon and in commemoration of valuable services he has rendered to the Association and to the hospital field."

Response to Dedicatory Address

ASA S. BACON

Mr. Bacon, in his response to the dedicatory address, said:

I am sure you all sympathize with me in the feelings which naturally almost overpower me. This loving testimonial far exceeds any expression of affection ever bestowed upon me previously, and I am deeply touched. The keenest sentiments of gratitude well up from my innermost being at the thought of the kindliness and goodness which have followed me during my forty years of hospital service. Nothing can blot the pride I shall always feel at having been associated with you.

You have not only honored me but you have honored the men and women who laid the foundation stones of our Association. Only a very few administrators now living are so blessed with the heritage that is mine in having known and worked with so many wonderful men and women. What-

ever I am today in the hospital field is the result of my association with them.

Although I am not in a reminiscent mood, nor do I wish to burden you with my experience, however, as my first meeting was in 1905, I have known all the officers from the beginning and worked with all but two of them. When I became Treasurer of the Association in 1906, we had 224 members. Of these only twelve are still recorded. They are:

	Joined	
Reuben O'Brien	1901	Retired
Dr. John N. Peters	1901	Retired
Dr. Thomas Howell	1902	Active
Dr. Frederick R. Washburn	1904	Active
Dr. S. S. Goldwater	1904	Active
Louis R. Curtis	1904	Retired
Louise Coleman	1905	Retired
Dr. Joseph Howland	1906	Retired
Charlotte Aikens	1906	Retired
Dr. W. L. Babcock	1906	Retired
Dr. Winfred Smith	1906	Active
Asa S. Bacon	1906	Active

Seven of these are retired, while five continue on the active list. Seven of the twelve are life members and past Presidents; one is a donor and one a benefactor. Today we have a total membership of 4,781.

It is the ideals of the men and women of the older generation that I have tried to follow in my work with the Association and as a hospital administrator—ideals, many of which we have dreamed but could not carry out because the life of our generation was too short.

As more of the older members pass on, I have an enduring faith in you, the men and women of today, who will carry on. There is much work to be done and opportunities to be met. You have many advantages which we lacked in the earlier years. There was only one small hospital magazine and no local state, or regional associations to disseminate information and exchange ideas about each other's activities and the advances made in methods of hospital administration. There were no university courses and no institutes to prepare us for our work. You have all these and many other advantages.

This library, the largest and most complete library of its kind in the world, not only serves the hospital people of this country in a most helpful manner but it also stands as a symbol of the progress that has been made in hospital service during the forty-one years since the American Hospital Association was founded. I am proud and grateful to have my associates and friends give my name to an institution whose sole purpose is to assist hospitals in giving better service to suffering humanity.

Faulty Sterilization Technique

Early in 1928, Hervey[1] reported an explosive outbreak of typhoid fever occurring in a general hospital and attributed to the improper sterilization of a modified Murphy drip apparatus. Since then many improvements in sterilization technique have been made but quite recently the New York State Department of Health has reported an outbreak of six cases of Sonne dysentery, all on the same floor of an up-state hospital, through the use of equipment to administer fluid by rectum.[2]

The following comments of the Department on this subject are of interest to all hospitals and are here quoted:

> "The danger of unsterilized equipment for administering fluid per rectum has been pointed out on numerous occasions in the past. However, investigation reveals not infrequently that such equipment is not being properly sterilized, with the result that the stage is all set for transmission of one of the enteric diseases if a case or carrier becomes one of the hospital patients, and the equipment is used. Scrubbing alone is not sufficient, and even boiling will not destroy pathogenic organisms if the air is not completely expelled from the interior of the tubing of the apparatus, and if the equipment is not entirely submerged in the boiling water. Furthermore, it has been found at times that just the tips or tubing have been sterilized while the enema cans or bags have not, although they have been contaminated as well, either through the reflux of infectious material into the container or through the unfortunate practice, which sometimes is followed, of inserting the tip into the container in carrying the apparatus from the patient's room after use."

W. H. Walsh, M.D.

[1]Hervey, C. R., M.D., A Series of Typhoid Fever Cases Infected per Rectum, *American Journal of Public Health*, Vol. 19, 166, 1929.

[2]*Health News*, New York State Department of Health, Vol. 17, No. 5, January, 1940.

Modern Resuscitation Procedures

GORDON BATES, M.D.

ARTIFICIAL respiration is applicable to a number of conditions of which drowning, carbon monoxide poisoning, post-anesthetic poisoning and morphine poisoning are examples. It may be carried on by various methods of which perhaps the Schaeffer prone pressure is the most familiar. Artificial respiration by means of mechanical methods such as for example, the use of the Drinker apparatus or iron lung is applicable to some conditions.

Obviously, there has been considerable misunderstanding as to the possibilities of artificial respiration. This has been especially true in drowning cases. For some reason, probably because few physicians see more than one or two such cases in a life-time, several widespread misconceptions have arisen. Most outstanding are these: (1) that immersion for more than four or five minutes is invariably fatal, and that therefore artificial respiration will be useless in such cases; (2) that in an apparently drowned person, absence of the ordinary signs of life, notably pulse beat, respiration, and ordinary heart sounds, means death; (3) that if these are absent, artificial respiration is useless; and (4) that in any case where artificial respiration *is* attempted, it need be kept up for a short time—half an hour to an hour.

Actually all of these ideas are ill-founded. There are records of the revival by artificial respiration of persons who have been under water for periods even up to half an hour. In such cases all signs of life may have been absent for hours. Life has still been present and long continued artificial respiration has been successful.

It is interesting to note that in Reese's "Jurisprudence and Toxicology," printed over thirty years ago, the statement is made that a person may be under water for fifteen minutes and still live, although in such cases the suggestion is made that there has been syncope. Although this fact was known so long ago, the mistaken ideas I have mentioned have persisted.

The Author

● **Dr. Gordon Bates is the General Director of the Health League of Canada, Toronto, Canada.**

Drowning

The following cases are of interest—

Case No. 1—A swimming instructor at a Y.M.C.A. in Toronto, states that several years ago in the country a little girl fell into a deep swimming hole. She had been on the bottom for fifteen minutes. There was no doctor present. The swimming instructor dived into the swimming hole, brought the girl to the surface, did artificial respiration for an hour and a half and the child recovered.

Case No. 2—Dr. ....., Toronto, states that some years ago in Newfoundland a man fell into the sea and was under half an hour. Artificial respiration brought him around.

Case No. 3—Dr. ....., Ontario, states that he was present when a man was brought out of the water, having been completely submerged for twenty or twenty-five minutes. Artificial respiration was undertaken and the man was revived.

Case No. 4—Harold Stafford, 12, was saved from drowning in Kingston Harbor, June 14, 1938. The boy had been under water for 9 minutes before being dragged to shore. Artificial respiration was applied until the arrival of the fire department pulmotor.

Case No. 5—In an extract from a letter from the American Red Cross Society, concerning the time element, you will find this statement: "This amount varies; five minutes submersion produces death in some cases, while others have been revived by artificial respiration after twenty minutes or even up to thirty minutes of submersion.

"The United States Coast Guard reported a case which occurred on July 4, 1906, in the State of

Rhode Island. The victim was reported to have been under water from 32 to 33 minutes. The report states that the first sign of life was observed after an hour and twenty minutes work."

Case No. 6—On July 7, 1937, a little girl was playing on a raft near a power house. She fell into the water and sank. Two boys swimming near the spot dove 17 times before they found the child on the bottom near the wall. She was brought to shore, artificial respiration started by a lineman and after 35 minutes, she was breathing normally but was unconscious. After 24 hours in hospital she made a complete recovery.

Case No. 7—In a communication to the Committee on Artificial Respiration, a mother living in Alberta states that her eighteen months' old baby fell into a wash boiler of water and remained under water for twenty-five minutes. Artificial respiration was commenced and there was no sign of life for four hours. The baby recovered and is still living—ten years later.

Electrical Shock

It will be well to consider here the information which has been available for a number of years in connection with severe electrical shock resulting in apparent death. It is now known that in many of these cases the immediate institution of artificial respiration will be successful in spite of the fact that all ordinary signs of life are absent. A recent investigation into a number of electrical shock cases by Wills MacLachlan showed that where artificial respiration was instituted within one minute ninety per cent of the victims were resuscitated; where there was a delay of six minutes only six per cent recovered. One cannot but ponder on the fact that previous to the time when such information became common knowledge, especially among physicians working in the electrical industry, many deaths occurred because it was not realized that absence of all signs of life does not always mean death. The following cases are also of interest:

Case No. 1—On May 21, 1926, a young man, cleaning in a power house, received a shock of 22,000 V. Fellow employees immediately started artificial respiration and in about 45 minutes, the man was breathing. His burns were so severe that he could not be moved and a doctor and nurses were brought to the power house, where he was kept for four days. He was removed to a large city hospital where his injuries were found to be so severe that a large piece of his skull had to be removed. He has made a thorough recovery and is carrying on a useful life with the same organization.

Case No. 2—On May 20, 1927, a young lineman came into contact with 26,000 V. at 2 o'clock in the afternoon. He was unconscious and not breathing. He was lowered to the ground and artificial respiration was started by fellow employees. This was continued on the floor of the ambulance while he was being transported to hospital; also on boards on top of a cot at the hospital. Communication was established between the local doctor and consultants in a large city and it was not until 10 o'clock at night that the man was breathing by himself.

In this case it required 8 hours of artificial respiration until the man was safe. This is the longest case of a resuscitation from electrical shock of which there is any record.

Case No. 3—Two men at Niagara Camp in 1916 were struck by a bolt of lightning. The lightning struck the bayonet of one man, jumped across the bayonets of a file of thirty men and grounded through the rifle of the last man in the file. The end men were knocked out. Medical officers were called. The men were examined and as there was no sign of life they were judged to be dead. One medical officer thought that this was an opportunity to demonstrate artificial respiration. His men were put to work on one man. This man was revived in about three-quarters of an hour. The other man died.

Tonsilectomy Complications

Recently, in a large city hospital an operation for the removal of tonsils and adenoids was performed in a child twelve years old. After the tonsils had been removed an obstruction to breathing appeared. The usual signs of asphyxia followed. Artificial respiration was ineffective and the child died.

On post mortem some fluid blood was found in the large bronchia and some of the smaller bronchi. In the opinion of attending physicians this was insufficient to cause death. It was considered that laryngeal spasms was a major factor.

Work of the Committee on Study of Artificial Respiration

During the last year, because it was realized that what was true in apparent death from electrical shock may well be true of other conditions, and because there was convincing evidence of the need of further information in drowning cases, the obtaining of which might have far-reaching consequences in all cases of this and other conditions to which artificial respiration may be applicable, a committee of the Health League of Canada has been at work gathering data from various sources, some of which data are included in the present

paper. It was observed with reference to cases of recovery after apparent drowning that there were great differences in the time during which the victim had been under water. It was also noted that in many deaths from downing on post mortem, no water was found in the victim's lungs. As a matter of fact this had been fairly common knowledge for a number of years, but no one had been able to explain it.

Shortly after the work of the Committee commenced, it was possible for members of the Committee to study actual cases of drowning. In one of the two first cases seen, it was observed that application of the Schaeffer method did not result in air entering the lungs. Subsequently in a series of six cases the same observation was made in three.

Examination by means of a laryngoscope revealed the fact that where artificial respiration failed to fill the lungs in each case the larynx was closed by an apparent spasm.

The Committee was fortunate in early securing the active cooperation of the Department of Medical Research of the University of Toronto. Investigations as to the physiology of drowning were carried on by Sir Frederick Banting, Drs. G. E. Hall and J. M. Janes, and Mr. B. Leibel and Mr. D. W. Lougheed, under the direction of Sir Frederick Banting, all of whom became members of the Committee and already several papers have been published on the subject.

We now propose to submit some of the more important findings of these research workers.

The following section of the paper by Mr. Lougheed is based on experimental work already prepared.

At the suggestion of the Committee on Resuscitation the investigation of death from drowning was undertaken in the Department of Medical Research, of the University of Toronto, under the direction of Sir Frederick Banting in 1938. The purpose of this investigation was to study the process of drowning and the efficacy of certain suggested resuscitative measures. The results of this research have been reported in several papers and may be briefly summarized as follows:

Various animals were used for experimental purposes. Almost all of the work was carried out on dogs. Conscious animals were used, and any operative procedures incident to the experiment were done under local novocaine anesthesia.

It was first ascertained that in some drownings no water was found in the lungs. Using rabbits, it was found that 10 cc. of water injected hypodermically into the trachea, immediately below the larynx sufficiently close to cause irritation of the vocal cords, resulted in death. In this case death did not result from drowning but from suffocation due to laryngeal spasm.

On the other hand, in a further experiment where water was introduced by cannula into the trachea well below the larynx, 100 c.c. instead of 10 c.c.s., were required to cause death. This was death from true drowning uncomplicated by spasm.

Hypothesis of Laryngeal Spasm Tested

The hypothesis of laryngeal spasm was tested on dogs as follows:

The Preparation—The application of water was carried out by means of a special mask, allowing complete submersion of the head of the animal and leaving the rest of the body free for experimental investigation of the drowning process. Cannulae were inserted low on the neck into the trachea and oesophagus. The animal may breathe freely by the lower tracheal cannula. Any water passing through the larynx is collected from the upper tracheal cannula. Water swallowed is short-circuited from the oesophagus and so does not reach the stomach. In this case it was found that only about 5 c.c.s. of water entered the trachea. In other words the glottis opened for only an instant. The animal swallowed water indefinitely and showed no other unusual signs. It would seem that reflex closure of the glottis resulted from continual swallowing or from water in the region of the vocal cords. Breathing proceeded somewhat irregularly but apparently adequately.

Modification of the Experiment—Any water swallowed entered the stomach. When this organ has reached a certain degree of distension, reflex regurgitation occurred. At the beginning of the experiment, a small amount of water was seen to enter the trachea through the larynx. No more was observed, although the stomach filled and emptied several times. Apparently reflex closure of the glottis prevented the entrance of water into the trachea in this instance also. As swallowing was not continuous, some other mechanism might perhaps have been responsible for the continued closure of the glottis after the first small amount of water entered.

Further Modification of the Experiment—A clamp has been placed on the oesophagus. The water was applied by mask as before but no swallowing could occur. The water, at a considerable pressure—5 c.m.s. of water—remained in the pharnyx. In this case also, after an initial 10 c.c.s. no more water was observed to enter the

trachea. As there was no swallowing, it would seem that the presence of water in the upper part of the trachea reflexly caused the glottis to close and to remain closed against the water in the pharnyx. In one or two cases the animal seemed to find that relaxing the spasm of the larynx had no serious result. In such cases the glottis was relaxed at each inspiration allowing a spurt of water to enter the trachea.

If the entrance to the lungs was stopped by obstructing the lower tracheal cannula, in a certain percentage of animals, only a few c.c.s. of water entered the trachea. This percentage—about forty—corresponded to the number found with no water in their lungs after drowning. These animals died of asphyxia. It would seem, then, that the presence of a small amount of water in the upper part of the trachea, in certain individual animals may set up a reflex closure of the glottis of such a strength that the spasm is not overcome and the animal dies of suffocation.

It was found that this spasm was aggravated by anoxemia or deficiency in the oxygen content of the blood and persisted after apparent death.

Changes in Blood Gases During a Typical Experimental Drowning Allowed to Go to the End—It was previously assumed that under these conditions, carbon dioxide continued to accumulate in the blood. This experiment shows that actually, after a preliminary rise, the blood carbon dioxide falls to very low levels. This is a contradiction of all previous findings. Obviously this comparative absence of carbon dioxide, the strongest of respiratory stimulants, will diminish the possibility of voluntary respiration. This finding suggests the need for the application of carbon dioxide in efforts at resuscitation.

Studies on the Heart During Experimental Drowning—After an initial increase, lasting about 1 minute, the heart rate falls sharply to what is termed the idio-ventricular rate. This means that a condition of complete heart block is present. Just before the animal finally collapses, a second increase in heart rate usually occurs, probably due to a final desperate release of adrenalin. Following this stage, the heart action becomes too weak to record kymographically. Heart action at this time can not be heard with a stethoscope. However, the heart action was also followed throughout with an electrocardiograph. When the action becomes very weak, one of two things may happen. The rate may increase greatly. Here the heart goes into a state of fibrillation. In other cases where fibrillation did not supervene, slow ventricular complexes could be recorded for, on an average, as long as 25 minutes, although cardiac activity was recorded in one case for over one hour. These post-asphyxiate beats were probably non-expulsive.

Conclusions of the Committee

As a result of the work of the Committee on Artificial Respiration of the Health League of Canada, the following conclusions have been arrived at:

1 Spasm of the larynx exists in a large but as yet unknown proportion of cases of drowning in humans. This spasm is merely a persistence of the normal protective reflex which prevents water from entering the lungs on swallowing. It explains the fact previously noted that frequently no water is found in the lungs of drowned persons on post mortem.

2 In all cases in which laryngeal spasm is possible (wherever laryngeal irritation by water or other fluid is present) one should make sure that artificial respiration results in free passage of air into the patient's lungs. Forcible artificial respiration against a closed larynx may result in pulmonary hemorrhage or other damage.

3 It is likely that a means may be developed whereby such spasm may be reduced with sufficient speed to permit the effective application of artificial respiration. The use of a special type of laryngeal catheter is suggested.

4 In all cases in which artificial respiration is applicable speed is of the greatest importance. Every minute wasted in the application of artificial respiration makes success less likely.

5 The use of CO_2 (5 per cent) in oxygen is desirable through a laryngeal catheter of proven type. A catheter with an aperture in the side only should not be used. There must be an aperture in the end.

6 The significance of laryngeal spasm should be stressed. Unless this spasm is overcome where it exists continued artificial respiration will be useless and death is certain. It is suggested that where the spasm cannot be dealt with by means of an intratracheal catheter, tracheotomy is desirable.

7 The ordinary signs of life mean little and should be ignored until every effort to restore life has first been made.

8 Artificial respiration must be kept up for hours in all cases. It is a safe rule to keep on until either the patient revives or rigor mortis sets in. It is noted that in one case of electrical shock reported here eight hours elapsed before the patient showed any signs of life.

9 While laryngeal spasm is not significant in

some cases, this investigation has tended to emphasize the importance of long continued artificial respiration by the prone pressure or Schaeffer method in all conditions to which it may reasonably be applied. It is suggested that there should be no let-up in the application of artificial respiration for transfer to an ambulance or for any other reason; also that a hospital operating table is not a suitable place for the effective application of the prone pressure method. A broad flat surface is always desirable—it is hard to improve on the floor.

10 The discussion of artificial respiration in drowning cases and the possibility of reducing spasm brings out the fact that persons trained to introduce a laryngeal catheter are frequently not on the spot and creates an entirely new problem. It is possible that lifeguards should be trained in this procedure.

11 The fact that physicians frequently stop artificial respiration too soon is the direct result of inadequate teaching in medical schools both of the possibilities and methods of artificial respiration. This should be corrected by special courses. Thorough training of all interns in hospital is also essential.

Chaplain Service

The work of the hospital chaplain has a place of recognized importance. People in sickness, suffering, bereavement, and approaching death, to a considerable extent, look to religion for consolation and support. So it has always seemed appropriate that the services of priest or minister of religion should be available to the patients in any hospital at any time.

However, from the standpoint of doctor and nurse, the work of the chaplain has seemed to be something apart from the main work of the institution, which is the treatment and care of sickness. It seemed to belong with the personal services which are important for the comfort and happiness of the patient but have no direct relation to his recovery from sickness, and as far as the principal objectives of a hospital are concerned, chaplains could as well be dispensed with.

There are indications of a change in the valuation of the chaplain's work. The growing emphasis on religion as a constructive force in everyday life as well as a means of salvation in a future world, the better understanding through psychology of the relationship between mind and body, and the influence of the thoughts and emotions in aiding or retarding recovery are giving new significance to the religious ministrations in a hospital.

To a considerable percentage of the patients in any hospital, religion is profound reality and the practices of religion are familiar. Through the religious approach the patient's emotions may be stabilized and faith and courage be substituted for fear and despair.

The change then is in the direction of fuller appreciation of the therapeutic value of religion and the growing tendency to regard the minister in the hospital as a cooperator with the doctor in helping at least to supply certain conditions indispensable for the success of the doctor's work.

A literature is beginning to develop. Two books may be mentioned: "The Art of Ministering to the Sick," in which Dr. Richard Cabot and the Chaplain of the Massachusetts General Hospital collaborated. "The Exploration of the Inner World," by Anton T. Boisin, Research Associate in Psychology of Religion and Chaplain in the Elgin State Hospital.

The future will undoubtedly see a drawing together of physician and chaplain as each understands and appreciates the work of the other, and a recognition of the work of the chaplain as really a therapeutic agency and an essential part of the organization of every hospital.

Rev. Thomas C. Marshall, in an address before the Hospital Conference of the American College of Surgeons, Los Angeles

The trend in hospital costs has been definitely upward for a number of years and to again make a comparison with five years ago we find that in 1934 our cost for maintenance was $268,662, whereas the past year it has increased to $315,903. This increase is not due entirely to the larger number of patients and personnel although these naturally account for part of it, but to the increased cost of diagnosis and treatment of our patients which modern medicine requires. While the cost per day therefore has materially increased we have previously called attention to the fact that the cost to the patient is actually less because of the shorter stay in the hospital.

—*Robert Packer Hospital*, 1939 *Report.*

Mother Marie

Mother Marie, administrator of Misericordia Hospital, New York City, and one of the founders of the Catholic Hospital Association, died on February 1. Sister Marie was formerly superintendent of nurses at Oak Park Hospital, Oak Park, Illinois; administrator of St. Mary's Hospital, Green Bay, Wisconsin; and administrator of Huber Memorial Hospital, Pana, Illinois.

Control of Postoperative Infections

MICHAEL L. MASON, M.D.

THE control of postoperative infection depends upon close attention to a great number of details on the part of the surgeon and his associates, of the nursing staff and laboratory personnel, and of every one connected with the maintenance of the hospital.

The factors which have to do with the development of a postoperative infection may be placed into two large groups, both of which must be thoroughly studied before the responsibility for an infection can be placed. The first group of factors has to do with the *bacteria* themselves, with their identification, with a study of their virulence and the determination of the paths taken to gain access to a particular wound. The second group has to do with the *resistance* of the patient to specific bacteria or to bacteria in general. It is this latter group which I feel has been neglected, since it is apparent to anyone doing surgery that the simple presence of bacteria is usually not enough to cause an infection—the bacteria must fall on fertile soil. When a study of postoperative infections is begun it is customary to devote a great part if not all energies toward ferreting out the sources of bacterial contamination, and very excellent results have been obtained by preventing the access or probably simply reducing to a minimum the number of organisms gaining access to the patient's wound. While we must not curtail our efforts in this direction and must strive for the possibly unattainable goal of complete asepsis, we must not neglect the second factor which has to do with infection, that is the resistance of the patient to bacterial invasion. When a surgeon's wounds fail to heal by primary intention, he should ask himself not only whether his instruments, supplies, and dressings are sterile, but also wherein he may have been at fault in operating technique.

Lowered Resistance as a Contributing Factor to Postoperative Infection

Lowered resistance of the patient to infection and disturbances in wound healing may be due to general disease; for example, diabetes or nephritis, or to some nutritional disturbance or wasting disease or to a prolonged illness. During the past few years it has become apparent that the vitamins play an important role in the development of postoperative complications and disturbances in wound healing and a surprising deficiency of vitamins has been found to exist especially in patients of the low-income group in our large charity hospitals. The observations of Hartzell, Wolfer and Hoebel, Bartlett, Jones and Ryan, and others, show not only that a low vitamin C blood level is present in many patients with wound disturbance, but also that an increased utilization of this vitamin indicates an increased need for it in tissue repair. Various circulatory diseases and local circulatory factors are of considerable significance in wound healing and must be sought out in individual cases.

The Author

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Local Factors in the Wound

I should like to emphasize especially local factors in the wound itself which predispose to disturbances in healing and consequently to wound infection. These have to do with lowering of the local tissue resistance to bacterial contaminants. Here we think first of tissue injury, as in the traumatic case in which the surgeon takes pains to remove obviously devitalized tissue in order that the remaining less severely injured tissues are not burdened by the extra load of removing it. However, mechanical and chemical injury may be done by the operation itself. I refer particularly to operative technique and methods of dealing with and handling tissues.

Skin Preparation

We may begin with skin preparation, which usually consists of a careful washing of the skin

*Presented at the Hospital Conference of the sectional meeting of the American College of Surgeons, New Orleans, January 17, 1940.

and the application of some mild antiseptic agent. As far as I have been able to ascertain, it makes no difference what this agent is if it is very mild. In my own experience, wound healing is better if the antiseptic is discarded entirely and reliance is placed on a careful and gentle 10-minute washing with pure white bar soap. In fact, a series of so-called "clean" appendices, in which the skin was prepared simply by washing, showed an incidence of disturbed wound healing in but 0.45 per cent of cases, as contrasted with 1.03 and 3.00 per cent when picric acid and tincture of iodine respectively were used.

Handling Tissues

The methods of handling tissues should also be scrutinized. Mechanical damage with forceps and retractors and rough blunt dissection are no less harmful in the hands of the surgeon than the accidental injury. Large hemostats, mass ligation, tight sutures, approximation under tension are all productive of tissue death or lowered resistance and favor the development of infection. Foreign material left in the wound may be a constant source of irritation and trouble. Heavy sutures, especially heavy catgut, which because they can be tied easily and tightly, may speed up an operation but leave an unnecessary amount of foreign material in the wound and tend to produce reaction. Fine sutures, whether of catgut, silk, or cotton no stronger than the tissues will hold, may be less easy to tie and are more easily broken than thick heavy ones, but the surgeon is not tempted to suture under tension and he certainly leaves foreign substance behind. While silk and cotton are definitely less irritant than catgut, size of suture material and methods of using it are also important factors.

During the operation the wound exposed to the air becomes dry and the superficial layers are subjected to heat from the operating room lights. Blood and cellular debris accumulate in it and foreign matter and, incidentally, germs fall into it from the air. This drying and heat and accumulation of foreign material interferes with healing powers and lowers the tissue resistance to infection. This factor may be controlled by irrigation of the wound from time to time with normal salt solution.

Careful hemostasis, meticulous closure without tension and provision for rest of the patient and area operated upon are all important factors in controlling postoperative infection.

Wound healing, and consequently the incidence of postoperative infections, is often influenced by the type of incision, a factor which Singleton has emphasized in his study of wound disruption.

Four Main Problems in Preventing Access of Bacteria to the Wound

The second set of factors to be considered is the access of bacteria to the wound, either directly on dressings, instruments or fingers, or indirectly by falling into the wound from the air or by droplet contamination from expired air. Here we have four main problems—first, that of providing sterile instruments and supplies and of keeping them sterile until they are used; second, that of controlling expired air of surgeons, assistants, anesthetists, nurses, orderlies, and visitors who come into the operating room or into any room in which a wound is uncovered; third, that of reasonably sterilizing the surgeons' hands by careful washing and checking of gloves for minute punctures, and fourth, that of sterilizing the operating room air.

Sterilization of Instruments

As for the sterilization of instruments and supplies, it has seemed to me that the only sure method of sterilization so far known is heat sterilization, either by boiling or by the use of steam under pressure. Certain instruments, because of sharp edges, or material of which they are constructed, are commonly sterilized with chemicals, but I do not believe anyone claims that such methods are as efficient as the use of heat. It is now generally conceded that heat sterilization of catgut is the only sure method of rendering it aseptic.

Simple boiling of instruments, according to Walter, does not insure asepsis unless the instruments have been carefully cleansed mechanically beforehand to remove spores which are resistant to the temperature of boiling water. With boiling also one must take into account oil and grease and scale on instruments which interfere seriously with proper sterilization. As to control of sterilization, it would seem from Walter's study that the tell-tale indicators are not reliable or practical, first, because of difficulties in locating them; second, because of difficulties in their interpretation, and third, because they are not consistent performers. It seems to me that the most reliable check is that devised by Walter, who has described a thermostatically controlled timer and switch which locks the autoclave doors until the required exposure to steam under pressure has taken place. As check of the efficacy a thermo-switch is placed in the densest bundle, this switch activates a timer which records the length of time during which the center of the bundle is subjected to sterilizing conditions. My technical knowledge of autoclave or other types of sterilization, however, is meagre and I must confess to almost complete ignorance, as far as first-hand knowledge goes, of methods

of checking the efficiency of any type of sterilizer. However, in the main it has seemed to me that at the present time the ordinary run of postoperative infections can rarely be attributed to faults in preparation of sterile supplies as they are furnished to the surgeon.

Once sterile instruments and supplies are furnished, however, the question of keeping them sterile arises. Here come in such questions as storage for short periods of time, of wrapping so that easy access without contamination may be had, of screening the instrument table in the operating room, of discarding the large central supply table of sterile instruments in favor of separate set-ups for operation, etc. These are things of which I have only a general knowledge, and, like many surgeons, I am afraid I have allowed these details to be supervised by a senior member of the surgical staff without as careful scrutiny as they deserve. I have been too concerned with what I as a surgeon did with the instruments and dressings after they have been furnished to me and have neglected to inform myself as to important details of sterilization.

Masking

However this may be, it has seemed to me that breaks in operating room, emergency room, and dressing technique were probably more important sources of postoperative infections. Here the surgeon must carefully scrutinize himself and his associates. Carelessness in masking, it would seem, is as important, if not more so, as the question of an efficient mask. Probably no mask yet devised is perfect, but in the search for the perfect mask we must not neglect to use properly the ones we do have. The surgeon must insist that everyone entering the operating room have the nose and mouth masked and the hair covered. Although we are very careful now to insist upon proper masking for the operating room, masks are still somewhat of a rarity in the emergency room where wounds are examined and treated by a bareheaded and unmasked intern, resident, or surgeon; attended by unmasked nurses and watched by a gallery of friends and relatives, likewise without masks. Much rarer yet is it to see the use of masks when open wounds are being dressed about the wards or in the private room. Granted that almost all dressings are done on closed wounds or wounds protected by granulations, still many are not, and undoubtedly we should protect them from droplet contamination.

One break in masking technique which I am afraid the majority of us commit is that of leaving the patient unmasked while operating under a local anesthetic. The patient's wound must be protected from his own expired air as well as from that of the surgeon and his coterie.

As for sterilizing the surgeon's hands, my own feeling is that conscientious scrubbing is infinitely more important than the number of antiseptic solutions through which they are passed afterwards. An English surgeon has recently checked rubber gloves after use and found a surprising number of them perforated. This source of contamination might certainly receive some attention.

Operating Room Air

Any investigation of postoperative infection should take into consideration the amount of commotion and activity in the operating rooms, the number of times the doors are opened and other activities which stir up dust. It has been conclusively shown by Meleney that 10 times as many bacteria are afloat in the air of a room during an operation than when no operation is going on. Similarly, Hart has demonstrated a direct relationship between the number of bacteria in the air and the number of occupants of a room and the duration of their occupancy. The newer operating rooms now being built with glass screened galleries, where visitors may be seen but not heard, cut down this source of contamination.

Talking, and particularly whispering, during an operation have so impressed some surgeons as a source of droplet contamination that a system of signs has been developed to obviate this added hazard.

The surgeon today is again turning his attention to sterilization of the operating room air. I say again because Lister's first efforts were directed toward just this source of germs. With increasing knowledge, so many more important sources were discovered that air as a possible contaminant was for a long time forgotton. Today, however, with other factors pretty well under control, the air again becomes important. Hart has taken a leading role in the study of methods of sterilizing the air by ultra-violet irradiation. When other avenues of contamination can be shown to be closed, then the air must be considered.

Resume

In resume it has seemed to me that the control of postoperative infections is much more a direct responsibility of the surgeon than we have been willing to concede. Disturbances in wound healing occur more often because of lowering tissue resistance by trauma, chemicals, and irritative foreign bodies, than because of germs from instruments. Virulent bacteria gain access to a wound more often from droplets and fingers than from incompletely sterilized dressings and su-

tures. I do not say that constant efforts should not be made to control sterilization and ensure asepsis, but rather that operative technique and secondary human sources of contamination should be likewise diligently scrutinized. The surgeon is furnished with excellent tools; he must not, however, because of acknowledged imperfections in them, permit himself to be careless in their use.

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Increasing Hospital Facilities for Negro Patients

At least 5,838 new beds have been made available for Negro patients in hospitals throughout the country through the aid of grants and loans by the Public Works Administration. Fifty-nine and seven-tenths per cent, or 3,486 beds provided are for the insane; 25.2 per cent, or 1,469, in general hospitals; and 15.1 per cent, or 883, in tuberculosis sanitaria and other hospitals. The facilities range from seven ward buildings accommodating 1,170 patients at the North Carolina State Hospital for the Insane at Goldsboro, North Carolina, to a five-bed ward at the Municipal General Hospital at Quitman, Georgia.

These hospitals are distributed throughout seventeen southern and border states. The figures given are minimum estimates only, due to the impossibility of discovering from numerous applications whether facilities are being provided for Negro patients. In addition, no information can be secured concerning hospitalization for Negroes in those hospitals which include facilities to all people regardless of race without separate quarters.

An analysis of location of beds in general hospitals indicates that there is a noticeable tendency for more and more beds to be made available to Negro patients in the hospitals in the smaller towns and rural sections of the South.

One of the largest and most modern hospitals erected for Negro patients during the past five years with the aid of PWA funds is the Homer G. Phillips Municipal Hospital, St. Louis, Missouri. This modern, fireproof hospital which cost over $3,000,000 has a capacity of 685 beds. It is composed of five buildings—a service building, administration building, two ward buildings and a nurses' home and training school. The nurses' home provides dormitories for 146 nurses and 24 interns. Another municipal hospital for Negro patients was recently dedicated at Norfolk, Virginia. This hospital, The Norfolk Community Hospital, has a bed capacity of 54 and cost approximately $100,000.

In addition to these nonfederal hospital projects which provided beds for Negro patients, PWA recently made a grant of $700,000 to Freedmen's Hospital in Washington, D. C., for the purpose of erecting a tuberculosis annex. The building is three stories and has a capacity of 150 beds.

A "Chronic" Case Defined

Dr. S. S. Goldwater, Commissioner of Hospitals for Greater New York, was asked, on his recent visit to Chicago, to define a "chronic" case for hospital purposes. The definition as promulgated has been accepted by the Council Advisory to the Commissioner.

> "A chronic case, for the purpose of Welfare Hospital, may be defined as one suffering from a definite symptomatology of long duration or expected long duration, promising some possibility of improvement, relief, or cure under active medical treatment.
>
> "Chronic cases which might contribute to the advancement of medical knowledge through research are especially suitable for Welfare Hospital.
>
> "Cases are not desirable for Welfare Hospital when pathological changes are complete, when effective treatment for a specific condition is not practicable, and when there are no clear indications for hospital care; such cases, whether bedfast or ambulatory, should be cared for in homes for the aged, and it is the policy of the Department to make such provision for them as rapidly as possible."

A Plan for a Complete Hospital Anesthesia Service

SIDNEY C. WIGGIN, M.D.

ONE of the first, if not the first, of the community hospitals in the United States to establish an anesthesia department run by physicians practicing anesthesia on an independent basis, much as the other physicians of the staff practice their specialties, was the Faulkner Hospital of Boston which has 165 beds and cares for approximately 4,000 patients annually.

Anesthesia at the Faulkner Hospital, as at many other hospitals, had customarily been handled by the family doctor, by younger graduating surgeons, and by a few other physicians who specialized in anesthesia and were occasionally called by the surgeons. Since no effort had been made to organize a program for the care of patients in advance of anesthesia, they were given very little pre-anesthetic preparation except the few routine drugs ordered by the surgeons. The best procedure in anesthesia was not possible under these circumstances. Hence, in 1927 a physician specializing in anesthesia was appointed to the staff of the hospital. His duties, primarily, were administering anesthetics for the members of the surgical staff who wished his services, and he was available also to surgeons of other hospitals.

Organizing the Department of Anesthesia

Though this appointment improved the situation, the desire that patients in the Faulkner Hospital should have all the benefits to be expected from full development of modern anesthetic possibilities led the surgeon-in-chief and the hospital administrator to conclude in 1934 that the anesthetist should be in charge of anesthesia for all the surgical patients of the hospital. In April of that year, therefore, with the consent of all the surgeons of the hospital, an anesthesia department was organized on a plan giving the chief anesthetist as full authority as other heads of departments of the hospital and delegating to him complete care of the surgical and obstetrical patients in anesthesia.

The chief anesthetist found that with one assistant physician anesthetist, the anesthesia for the daily operating quota of the hospital could generally be adequately handled. To cover extra busy days, vacations, and illness, four alternate assistant anesthetists were appointed. Their required qualifications included

Graduation from a standard medical school

One year of internship at an approved hospital—at least

Special training in anesthesia for at least one year

Membership in the state or county medical society and local or national anesthesia society

The Author

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The Financial Arrangements

The financial arrangements which seem to be the dilemma of almost all hospitals were satisfactorily solved by an agreement which places the chief anesthetist on a private basis, allowing him to render his own statements direct from his office to the patient, and leaving him responsible for the recompense of his assistants. The department is responsible for the care of the service cases without remuneration. Expenditures for anesthetic equipment, and supplies, determined through a cost study, were budgeted with those of surgery and taken care of adequately by proportionate increase in the operating room fee. The department supervises the purchasing of equipment and supplies through a close alliance with the hospital administrator.

Responsibilities and Functions of the Department

The responsibilities and functions of the department thus organized resemble those of other services in the hospital—the department has general obligations to the practice of medicine as a whole, and special obligations in the performance

of its own work. Teaching and discussion are involved in both of these groups. The department gives lectures in anesthesia to the interns and nurses, emphasizing the duties of the nurse in relation to the care of the patient both before and after anesthesia, and supervises the intern in their training in anesthesia. The department members attend staff conferences and discuss the anesthesia complications with the other members of the hospital staff.

The course in anesthesia for the Graduate School of Harvard University Medical School is given by the anesthesia department at the Faulkner Hospital.

In the actual care of the patient, pre-anesthetic attention is of the utmost importance, and bulks large in the duties of the department. Efficient hospitalization and competent direction of the patient's mental health are essential to successful use of anesthetic agents. For this reason the administrator of the hospital in 1934 enforced the rule that all surgical patients, except emergencies, should be admitted at the latest two days before operation. This period allows the anesthesia department and the attending physician opportunity for more thorough observation of the patient for preparation before operation, and also gives the admitting officer a chance to arrange the operating schedule to the satisfaction of the surgeon, the anesthesia department, and the operating room, so that no conflicts are possible.

Preparing the Patient for Anesthesia

Shortly after the patient is admitted to the hospital he is visited by the anesthetist for anesthetic preparation. The patient's anesthetic requirements are determined from a study of his history, psychic and physical examination, and laboratory findings. In addition to hypnotics and pre-anesthetic drugs of importance in the preparation is the psychological management of the patient's emotional state. The orders for the hypnotics to produce sleep and relaxation, and for preliminary medications are left on the patient's medication sheet at this visit. The anesthetist consults with the patient's surgeon and internist or other consulting departments of the hospital if necessary.

By this preliminary care, the fear which patients have held for surgery and anesthesia have been practically eliminated. There have been no complaints from the patients. They recommend the service to their friends and relatives and return for repeated operations with confidence. The patient is assured of a good night's rest before operation and peaceful, comfortable care the day of operation, during induction, maintenance, and postoperative course.

Every possible detail of the patient's care is attended to; diet, fluids, hygienic care—carried out principally by the nurses—clinical observation, and treatment of complications such as respiratory or cardiac conditions. Before anesthesia is started, a recheck of the patient's clinical condition is made in order to eliminate unforeseen complications which might cause the anesthesia to be changed or postponed. With all these data well developed, the anesthetist administers the selected method of anesthesia. The clinical course of the patient is observed minutely and recorded on the anesthesia record throughout the operation. Early complications of anesthesia or the patient's condition are thereby noted and treated, immediately. Quite often serious complications are in this manner prevented from developing.

The anesthetist is the judge of the patient's condition and has full charge of drug therapy or fluid administration, thus relieving the surgeon of all responsibility for the patient's physical condition during the operation. Having full knowledge of the patient's physical condition preoperatively and during operation, the anesthetist cooperates with the surgeon in prescribing for the postoperative medication and immediate care, including fluid administration and oxygen therapy, posture for the various methods of anesthesia used, and measures to prevent pulmonary complications. The department consults with the surgeon on any postoperative complication to rule out anesthesia complications and assist in the treatment.

Methods of Anesthesia and Use of Anesthetics

All the methods of modern anesthesia are employed as indicated by the condition of the patient. Ether is used in the semiclosed, intrapharyngeal, oropharyngeal and intratracheal techniques; vinethine is used to supplement the gases and ether and by itself for short operations. Nitrous-oxide-oxygen and cyclopropane-oxygen are used with or without ether, by the carbon-dioxide absorption technique. At other times, the department employs avertin supplemented with the gases, ether, and oxygen, local novaine anesthesia or intravenous barbiturates. Spinal anesthesia is administered with combined novocaine and pontocaine, and regional anesthesia with novocaine. Advances in spinal anesthesia have been made in the past four years by the anesthesia department through the use of minimum doses of spinal agents supplemented by cyclopropane-oxygen, a technique called balanced spinal anesthesia and useful for borderline risk abdominal cases. Spinal anesthesia without any premedication, for caesarean section in diabetes, has likewise been adopted, with the results that the mortality rate among the babies has been reduced to a minimum. Investigations

by the department which are now going on include studies of anesthesia for chest surgery, preoperative and postoperative medication in relation to the hyposthenic patient and spinal anesthesia in cases of general peritonitis.

The anesthesia service is also available to the medical department of the hospital in the supervision of the oropharyngeal administration of oxygen for pneumonia and other respiratory diseases and for cardiac patients, in the care of asphyxial conditions, and in the administration of avertin and the barbiturates for the convulsive states such as strychnine poisoning and tetanus.

Activity of the Department in the Study and Advances of Anesthesia

This survey of the routine activities of the department suggests various lines of related activity in the study and advance of anesthesia. Concerning one major research activity—that dealing with safeguarding the administration of explosive anesthetics—more will be said later. Our immediate interest is in clinical research in anesthesia, which is carried on through detailed observation and records of the patient before, during, and after anesthesia. The patient is classified for choice of the pre-anesthetic drugs and anesthetics. From the clinical observations more knowledge is continually obtained concerning the use of the older preparations, while the newer agents are in the process of evaluation. The more common of the new preparations are the barbiturates for oral, intravenous, and rectal use; avertin; cyclopropane, vinethine, and such agents for spinal anesthesia as pontocaine and nupercaine. For every patient, the physiological and pharmalogical results of the reactions to the pain-relieving drugs superimposed by the effects of surgery are recorded. The anesthesia record hence becomes one of the most important sections in the surgical record. From data derived from such clinical investigations findings are published in the current medical journals.

Selection and Maintenance of Equipment

In view of the rapid improvements and developments in anesthesia apparatus—such as the metric controlled carbon-dioxide absorption gas machines; the needles and other equipment for spinal anesthesia, the various endotracheal tubes and devices for intratracheal administration of the inhalation agents, and the improved apparatus for intravenous anesthesia—the department regards the selection and subsequent maintenance of this equipment as part of its duty.

This general program in research and in testing of material and equipment has had as its object to fit the anesthesia to the patient rather than to resort to the old time methods of fitting the patient to the anesthesia. As a corollary, anesthsia can be and has been fitted to the individual operation, a fact which has helped to make possible the development of surgery in all its branches. Among the specialties thus assisted might be mentioned operations in the chest, such as pneumonectomies lobectomies, and thoracoplasties, brain and nerve operations, genito-urinary and gynecological operations, operations for carcinoma of the rectum, gastric surgery, and traumatic surgery in the age groups of 80 to 100 years of age, and operative deliveries in obstetrics.

Intensive Investigations of Fatal Explosions

The use in anesthesia of explosive mixtures which include ether combined with air, oxygen, nitrous-oxygen, ethylene-oxygen, or cyclopropane-oxygen; vinethine, and ethyl chloride, has been made a center of attention in the medical world by a very intensive investigation by the American Society of Anesthetists as a result of fatal explosions during the use of nitrous-oxide-oxygen, ether, and other gases in past years.

At the Faulkner Hospital the precautions and prevention laid down by the National Society have been adopted, and further rules have been worked out by the department staff, pending organized scientific investigation of the problem at the Massachusetts Institute of Technology under the Division of Biological Engineering, Department of Biology and Public Health, under the supervision of the departments of Biochemistry, Physiology, and Biological Research in conjunction with the department of Electrical Engineering.

Rules for the Prevention of Explosions of Combustible Anesthetic Mixtures

The rules for the prevention of explosions of combustible anesthetic mixtures which are observed at the Faulkner Hospital and which embody results of the major study mentioned earlier, are included in the following outline:

Explosive Anesthetics defined—

1 Ether alone, or

2 In combination with nitrous-oxide-cyclopropane or ethylene and oxygen

3 Cyclopropane-oxygen

4 Ethylene-oxygen

5 Ethyl chloride

6 Vinethine

Nitrous-oxide-oxygen is safe with respect to electrical equipment; static electricity; fire or heat—

Protection against static electricity—

1 Humidification above 65 per cent

2 Explosive gas mixture emptied at end of operation through face piece or exhalation valve

3 No emptying of explosive mixtures by disconnecting rebreathing bag

4 Anesthetist must discharge any static electricity and equalize potentials by contacting patient, operating table, and gas machine before turning on any explosive anesthetics—Most important rule to observe

5 Any individual entering this potential must contact machine and anesthetist remote from patient's head

6 Horton Megohm Intercoupler to be used routinely when any explosive anesthetic mixture is used in gas apparatus

7 No rubber soled shoes to be worn in operating rooms

8 No silk or woolen garments to be worn in operating rooms

9 No rubber cushions on anesthetists stools

Use of Diathermy or Cautery

If explosive mixture is to be used:

1 Surgeon must warn anesthetist 5 to 10 minutes before use of diathermy or cautery so that,

2 Anesthetist can shut off explosive gas at the tank and completely wash out rebreathing circuit in gas machine with nitrous oxide at least twice and shift to nitrous-oxide-oxygen

3 Use of substitute non-explosive anesthtics
a—Nitrous-oxide-oxygen
b—Intravenous-barbiturate
c—Local anesthesia

Use of open ether

1 Remove any open ether cans from room along with ether cone five to ten minutes before diathermy or cautery is to be used

2 Place wet towels over patient's nose and mouth

3 If prolonged use of cautery is needed, use substitute non-explosive anesthetics

Electrical Equipment and Fire

All electrical equipment such as lights, etc., must be turned on before operation and not touched during operation unless explosive mixture is discontinued and removed from gas apparatus

X-ray and Fluoroscopy—

1 No explosive anesthetic mixtures to be used

2 Nitrous-oxide-oxygen, spinal anesthesia, intravenous barbiturates, or avertin may be used

No flames, gas jets, cigars, or cigarettes, or any source of fire near anesthesia or operating rooms

Conclusion

The development of anesthesia at the Faulkner Hospital may be judged, in conclusion, to have eliminated that unbearable fear which patients experienced for some many years toward etherizing and operation. It has given the greatest safety to anesthesia and has eliminated many common complications which arose during operations. The postoperative complications have been greatly minimized and the convalescent time has been reduced for the large majority of patients. The patient has developed more confidence in the anesthetist, surgeon, and hospital. All patients are assured of expert anesthesia whether they are private, ward, or service cases.

At the end of five years' trial, the surgeons have commended the department for the care it has given their patients, for the relief from responsibilities it has given them, and for the aid which it has contributed toward improving their surgical technique. The hospital feels that it is serving patients in a more efficient, humane way by offering them the most scientific care in anesthesia. The department of anesthesia has been an economic asset to the hospital in more than one way. The nurses on the wards are relieved of much extra work by the reduction of postoperative complications. By the excellent cooperation of the admitting office, the operating room supervisor and her assistants, and the anesthesia department, the operating room is run with efficiency and speed. In 1934 the total operations were 1,200; in 1939 this number was increased to well over 2,000. The surgical staff has increased from 150 to 300 members.

In the last two years, several hospitals in and near Boston have adopted the Faulkner plan. They report greater satisfaction to the patient, the surgeon, and the hospital, and also that better surgery is being done. Since the development of the anesthesia service at the Faulkner Hospital, it has been the privilege of the department to entertain visiting physicians in anesthesia from all over the United States, and from Canada, England, South America, Mexico, Australia, New Zealand, South Africa, and India, and thus to contribute to friendly cooperation in medicine which is of national and international scope.

Colorado and Tennessee Law and Hospital Liability Insurance

IN THE past twelve months there have been handed down two decisions in which the courts of Tennessee and Colorado have permitted actions to be brought and maintained against charitable institutions, meanwhile preserving the familiar rule that charitable institutions may not be mulcted in damages for the neglect of an employee if to do so would be to encroach upon the trust funds of the institution. The actions were pursued to judgment, in both instances, favorable to the plaintiffs, the courts permitting recovery out of the insurance policies held by the hospitals.

It should be noted that in both Tennessee and Colorado, there had previously obtained a rule of law which permitted the satisfaction of a judgment based upon negligence, provided such judgment could be satisfied out of funds which were not a part of the actual trust property of the charity. Such a rule, then, made it relatively easy for the courts to hold that liability insurance policies were no part of the trust funds of a charity, and that therefore the judgment might be pursued to satisfaction inside the limits of the policies of insurance. As will be noticed, the holdings are contrary to the weight of authority elsewhere, but that fact cannot be said to lessen their importance because of the cogent reasoning behind each decision, and because of the possibility that other courts may feel constrained to follow those holdings.

Courts Hold That Insurance Policy Is Not Part of Charitable Trust Fund

Peculiarly enough, the issues were raised in the same way in each of the cases. In *Vanderbilt University v. Henderson*, 127 *S.W.* 2*d* 284, (*Tenn.*), the suit was for personal injuries, received by the plaintiff when he was negligently permitted to get out of his bed, at which time he was burned by a radiator. There was no doubt that defendant was a charitable institution, and it fully pleaded the fact of its incorporation as a charity, urging that the plaintiff, being a recipient of the charity of the institution, could not effect a recovery. In addition, the defendant pleaded a defense going to the merits of the case. Plaintiff then filed a reply to the effect that defendant was covered by a policy of insurance, and that the insurance company had agreed to pay any judgment rendered against the defendant, grounded upon its negligence. The judgment in favor of plaintiff was affirmed.

The language used by the court was most illuminative of the problem. It was said:

> "It is generally held that a charitable institution is not liable for the negligence of its agents and servants. . . . It is likewise held that the rule of nonliability of a charitable institution is not changed by reason of the fact that it carries liability insurance to protect it against any liability which the law imposes upon it. . . ."

The overwhelming weight of authority is that where a charity has procured liability insurance it does not, by reason of that fact, enlarge or add to its liability if it is not liable independently of the insurance. *Greatrex v. Evangelical Deaconess Hospital*, 261 *Mich.*, 327, 246 *N.W.* 137; *Enman v. Trustees of Boston University*, 170 *N.E.* 43; *McKay v. Morgan Memorial Co-op. Industries and Stores*, 272 *Mass.* 121, 172 *N.E.* 68; *Williams' Adm'x v. Church Home*, 223 *Ky.* 355, 3 *S.W.* 2*d* 753; *Mississippi Baptist Hospital v. Moore*, 156 *Miss.* 676, 126 *So.* 465; *Levy v. Superior Court*, 74 *Cal. App.* 171, 239 *Pac.* 1100; *Susman v. Y.M.C.A.*, 101 *Wash.* 387, 172 *Pac.* 554; *Stonaker v. Big Sisters Hospital*, 116 *Cal. App.* 375, 2 *P.* 2*d* 520. Some of the above cases will be discussed in the course of this article.

The court then said:

> "But we think that in this state this rule of nonliability extends no further than the protection of the trust property of the charitable institution from being diverted from the purposes of the charity to the satisfaction of a tort judgment. . . .
>
> "This we think, is a recognition that a charitable institution is liable for a tort of its

agent and may be pursued to judgment; but that such institution's trust property cannot be taken to satisfy such judgment, and that where such institution has liability insurance, such insurance is not trust property of the institution and may be appropriated to the satisfaction of such judgment."

By its employment of the above language, the court made it clear that in all cases in the future, involving charitable institutions holding such policies of insurance, recovery would be allowed, up to the limits of the policy. However, if a charitable institution does not carry this kind of insurance, it may be able to plead and prove its regular defense, and if it is shown that the institution has no funds available other than trust funds, it may successfully defend an action based upon the negligence of one of its employees. However, such a defense may be subjected to rebuttal by a showing that some of the funds of the charity are not actually part of the trust property, in which case the judgment obtained would be satisfied out of the funds which were held not to be actually a part of the trust property. Such a risk on the part of a charitable institution is best overcome by the procurment of adequate liability coverage.

Tendency of Courts Towards Rule of Exemption

Indicative of the tendency of courts to constrict the operation of the rule of exemption is the following language, taken from the Vanderbilt University Case:

> "This we think, is a recognition that a charitable institution is liable for a tort of its agent and may be pursued to judgment; but that the institution's trust property cannot be taken to satisfy such judgment, and that where such institution has liability insurance, such insurance is not trust property of the institution and may be appropriated to the satisfaction of such judgment."

That the sympathy of the court was with the plaintiff, and that it was aware of the apparent injustice of the rule of exemption is shown by the following comment:

> "In the present case the plaintiff, a paying patient, was delirious and irrational at the time he was taken to the hospital and at the time of receiving his injuries. We do not think that he can justly be held to have agreed to waive a right of action which the law gives him to recover for his injuries. We believe there is as much reason and justice in public policy for compensating a patient for injuries suffered by him through the negligence of the agents of a charitable institution, as there is for compensating a stranger for injuries so inflicted. Such an institution's trust property is protected from being applied to satisfy such liability in either case; but where it has liability insurance, we believe such insurance should be as available to a patient as to a stranger, where such patient has paid for service rendered him by such institution."

Rule of "Qualified" Liability in Dealing With Charitable Institutions Followed in Both States

The second case was that of *O'Connor v. Boulder Colorado Sanitarium Association*, 96 *P. 2d* 835, wherein the action was grounded upon the negligence of the defendant in caring for and in treating the plaintiff. A judgment in favor of the defendant was reversed, and the case was remanded for a trial.

It appeared that the defendant was a charitable association, and that it had pleaded that fact as a defense. Plaintiff replied to this plea of the defendant that the defendant was covered by a policy of insurance and that a judgment against the association would not affect the trust property.

The law of Colorado had been announced in an earlier case not involving the question of insurance, wherein it was held that an action might be maintained against a charitable institution, and that the judgment might be satisfied out of funds not actually a part of the trust funds of the institution. Therefore, in the instant case, the court was free to hold that an insurance policy was not a part of the trust funds of the institution, and that it might be reached to satisfy a judgment against the association, based upon the negligence of its employees. The attitude of the court was expressed in this way:

> "While the pleadings here admit that all property, real or personal, of defendant is held in trust for charitable purposes, it is also affirmatively alleged, 'That a judgment against the said defendant will not affect or deplete the charitable trust funds of said defendant in any respect, and that no property impressed with a charitable trust will be levied upon for the satisfaction of said judgment herein, and the court's decree herein may and will fully safeguard any charitable trust fund, and plaintiff consents thereto.'
>
> "It would seem, therefore, that no depletion of the trust fund of a charitable institution is here sought. Under the circumstances, and in harmony with our previous pronouncements, it would be just and reasonable to hold that defendant herein is subject to this qualified liability. Counsel for defendant cite cases

to the effect that the procurement of indemnity or liability insurance does not impose liability for torts where insured would not otherwise be liable. . . . These cases are primarily from jurisdictions where, unlike Colorado, liability of charitable institutions for torts, under the circumstances, is in any event precluded. In view of the qualified liability rule adopted in this state, we feel we are not at liberty to follow these authorities even if we should see any just reason for doing so, which we do not. We do not transgress the public policy that requires immunity from tort liability of associations with trust funds dedicated to charity, but we cannot agree that this policy goes so far as to include nonliability where a charitable institution has contractually and perhaps for the benefit of third parties, insured against its negligence. In fact, it is more reasonable to say that it is a wise precaution for such associations, in connection with their relation to those whom they serve, to protect themselves with insurance against injury resulting from their negligent acts, and the procurement of such safeguard should be encouraged. . . ."

As has been indicated, both the states of Tennessee and Colorado have followed what the Colorado court calls a rule of "qualified" liability in dealing with charitable institutions. The courts of those states have never held that a charitable institution is absolutely exempt from liability for the negligence of employees, and so, they have placed themselves in a position to announce just such decisions as have been noted in the Vanderbilt and O'Connor cases. The real basis of the decisions may be found in the language of the Colorado court when it writes of the jurisdictions holding to the contrary:

> "These cases are primarily from jurisdictions where, unlike Colorado, liability of charitable institutions for torts, under the circumstances, is in any event precluded."

In the states which have held that a charitable institution is not liable for the negligence of an employee resulting in injury to a beneficiary of the charity, it has been uniformly held that a judgment may not be satisfied from the proceeds of a policy of insurance.

Tendency of Other States Toward Rule of Exemption from Liability

Massachusetts, Kentucky, Washington, California, Michigan and Mississippi have, by the decisions of their higher courts, been placed in the column of states which do not recognize a rule which will permit a judgment to be levied out of funds of the charity which are, in fact, proceeds of a policy of liability insurance. Those courts have held that charities are exempt from the consequences of negligence on the part of an employee, but California has recently changed the rule of liability. It may be said that the weight of authority is still against the holdings announced in the Vanderbilt and O'Connor cases, but there is no guaranty that the law will remain as it now is. There is strong possibility that the Vanderbilt and O'Connor cases will present troublesome situations for charitable hospitals in the future, because of the fact that lawyers will attempt, in other cases, to do what counsel succeeded in doing in those two cases.

There is pending for decision in the Superior Court of Cook County, Illinois, a similar case, involving a charitable institution, wherein the same problem is being presented to the court. The plaintiff has filed a reply alleging that the defendant charity is covered by a policy of insurance, and is attempting to reach that insurance for the satisfaction of a judgment which may be secured when the case goes to trial. The court has called for briefs, which have been presented on behalf of both sides, and will announce its ruling in the latter part of February. This case is of great significance in Illinois, because of the fact that it is the first time when such a question has been presented for ruling. Illinois has uniformly held that charities are exempt from liability for the negligence of an employee, but the courts have not had occasion to consider the question under discussion. Should the decision be rendered adversely to the defendant, there is strong likelihood that there will be an appeal prosecuted because of the fact that an adverse decision will present the possibility of future judgments being satisfied out of funds not actually a part of the trust funds of the institution. Such a decision would, of course, be applicable to all charitable institutions, and would be detrimental to them even though they might carry liability insurance.

The significance of the decisions under comment lies not so much in the fact that they permit recovery from insurance funds, but in the fact that they permit recovery, unqualifiedly, from the funds of the charity not actually a part of its trust property. This calls for the procurement of adequate coverage, for it is conceivable that a judgment might be rendered against charitable institution which would be of such magnitude as to be without the limits of the policy of insurance, which would mean that the judgment could be satisfied in part from the funds of the institution which might be in excess of their requirements, or which might be held not to be a part of the trust property.

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EDITORIALS

A Great Political Party Surveys a National Health Program

One of our two large political parties entrusted to a well-selected committee the study of social, economic, industrial, agricultural, labor and public welfare programs, upon which to build its party platform to present to the voters for this year's presidential campaign. The report of this committee has been presented to the public through the party campaign committee.

Six paragraphs of a lengthy report deal with a proposed National Health Program. In common with other reports previously presented by the opposing party, by groups and organizations of social, welfare-minded people, and by individuals, it is apparent that in this report the committee, as far as the national health is concerned, is apprehensive or fearful of recommending a clear, constructive program for the social and economic betterment of our population groups, their institutions, and their social and fiscal needs.

The report incorporates some principles to which both hospitals and the medical profession can subscribe and which the public may well support. The report contains no recommendation or suggestion as to the manner or the means by which these principles can or will be put into effective operation. In some way, in studying this portion of the report, one feels that the committee does not know how these principles are to be implemented, or is afraid to make appropriate recommendations.

These statements in the report, our charitable institutions, our hospitals and the medical profession can well endorse.

***First*—"The Federal health service should be coordinated and concentrated within one department of government."**

***Second*—"The Federal health program should not weaken by competition or directly supplant worthy existing health agencies, but should work towards implementing and developing the agencies already in existence."**

***Third*—"The national health program should be operated by a cooperative utilization of the forces of government, the medical profession, and voluntary social groups."**

***Fourth*—"In both the service and support of existing hospitals and health agencies, the Federal Government should not draw a severe line of difference between voluntary hospitals and health agencies and governmental units. Both should be fostered in the national effort to raise the general health level."**

***Fifth*—"The now rapidly growing voluntary nonprofit health and hospital insurance plans may be developed to meet the problem of medical and hospital costs quite as effectively as governmentally directed plans could possibly be. They are more flexible and more readily adaptable to varied and changing conditions. Giving these voluntary plans a full trial, under helpful stimulus from government leadership, will develop a fund of experience which is now lacking."**

And so in a few short platitudes a great political party disposes of one of the most important national problems—the health of our people. No commitment is made to secure for them the things that are most essential to American life, the happiness that comes with honest labor and the health

to engage in gainful work. Whether the exigencies of politics will produce the measures which will insure to all our people good medical and hospital service, sanitary living conditions, and a wholesome and healthy environment neither the report recommends nor its prophets try to foretell. This can be said, that as far as the report goes in its relating its principles, it will meet the approval of the majority of those who study it.

The Increasing Use of Hospital Beds

Hospitals are having a new and pleasing experience. Instead of confronting a difficult problem of utilizing the vacant beds in our institutions, hospitals are now exploring ways and means of providing additional beds for patients coming to the hospitals. In our voluntary institutions the bed occupancy has reached 85 per cent, and higher in many areas, in the utilization of their beds. In the usual hospital practice this is a capacity occupancy.

The sources of philanthropic support, while greatly reduced, are not entirely exhausted. We have witnessed the passing of the great givers, the Rockefellers, Rosenwalds, Dukes, Macys, Guggenheims, Mathers, Harknesses, Swifts, Mills, Armours, multi-millionaires who distributed their fortunes to churches, hospitals and educational institutions. The individual gifts contributed toward the support of our hospitals will be greatly reduced, so there should be a large increase in the number of givers.

Hospitals are more on their financial own at the present than in any previous time. They are demonstrating their ability, through the excellence of their service, to increase the use of their facilities and the occupancy of their beds, and to add to the total of their revenues.

Three years ago an editorial in *HOSPITALS* emphasized the necessity of "Increasing the Bases of Hospital Support." How well the hospitals, particularly the voluntary hospitals, have done that is evidenced by their increasing incomes. Private support, while greatly reduced, has been more widely distributed. Our people have been educated in the values of hospital service and in the dignity and constancy of hospital performance and, best of all, hospitals have learned to help themselves.

Three years ago the American Hospital Association and its Commission on Hospital Service began the work of guiding the development of hospital plans. It met opposition from the medical profession, important elements of the public, and even from some hospitals. In this effort to broaden the bases of hospital support, birds of evil omen broadcasted their prophecies of failure and predictions of serious results to our institutions, the patient, and the physician. The wisdom of the plans and at times the integrity of the plans were seriously questioned.

And what are the results? Today, three years after, fifty-three plans are paying the hospitals, largely voluntary hospitals, $25,000,000 annually for services rendered their beneficiaries,—almost 10 per cent of the total cost of operation of all the voluntary hospitals in the country, and this in only fifty-three sections of the United States. The increase in payments for service to hospitals will average more than $5,000,000 per year, based on conservative estimates, in the increase in the number of participants. Hospital service plans are here to stay and form an important widening in the bases of hospital financial support. When large concerns like the Ford Motor Company, Kresge Stores, the steel plants of Pittsburgh, go into hospital service plans on a national scale, there can be but one interpretation, and that is that hospital service plans give the largest benefits to the employer, the employee, the hospital and the public.

Carrying the analysis of results further, the income the hospitals receive from service plans almost equals, and will soon exceed, the amounts paid for the care of patients in our nongovernmental hospitals by the Federal, state, township, county, and city governments in the entire country. It is twice as much as the total our hospitals receive from community chests, two and one-half times the total amount received from private contributions, and one and one-half times as large as the hospitals' income from their endowments, and 13 per cent of the total income received by all nongovernmental hospitals in the United States in payments made directly by the patients for their hospital care. No greater material benefits have

been conferred on our hospitals than the benefits they realize from their participation in the hospital service plans, which the American Hospital Association has so successfully sponsored.

And so the hospitals have done their part to help themselves out of their fiscal difficulties. They have distributed the cost of hospital service for more than five million people, they have strengthened and widened the base of their financial support and, to a larger extent and in a better way, they have met the challenge of the increasing costs of hospital service to the lower income groups and placed this service within their easy reach.

Federal Loans to Nongovernmental Hospitals

Hospitals are the expression of philanthropy universally applied. They belong to the isolated rural areas and the mining and timber sections as well as to our metropolitan centers. Like all philanthropies they have a business side. They constitute in their business operation an activity which disburses one billion dollars a year, one-half of which is for payroll. They keep 700,000 people constantly and gainfully employed. As consumers of the products of our farms, dairies, factories, mills and work-shops, they are important factors in our economic life. In addition they spend two hundred million dollars each year in new construction and in rehabilitation of plant and equipment.

The American Hospital Association and the Joint Advisory Committee have for many years asked that Federal money, at reasonable interest rates, be made available for loans for the operation and betterment of nongovernmental hospitals, to the same degree and under like conditions that Federal money has been made available to commerce and industry. The requests of the Joint Advisory Committee have at last been given favorable consideration.

Senator James M. Mead of New York has introduced his bill, *S.* 3246, in the Senate and Honorable William T. Schulte of Indiana has introduced a similar bill, *H. R.* 8288, in the House, making an appropriation of $300,000,000 to be used as a loan to public bodies and nonprofit organizations for hospital and other public works, not less than $100,000,000 of which will be for hospitals for construction, rehabilitation, and other purposes. The loans are to be at 2 per cent per annum interest, and to be paid in part at any time in any amount, but must be paid in full at the expiration of 50 years.

Though long delayed, this legislation will be no less welcome. It is a concrete evidence of President Roosevelt's philosophy of the "partnership between government and nongovernmental charitable agencies." This legislation should receive the support of every nongovernmental hospital.

Hospital Census for 1940

The Bureau of Census, after conference with Graham L. Davis, Chairman of the Committee on Accounting and Statistics of the American Hospital Association, has indicated its purpose of broadening the scope of the 1940 census to include important data relative to hospitals. The census will not ask for fiscal information. The questionnaire which the Census Bureau will ask the hospitals to accomplish is not difficult, and each hospital will be glad to cooperate with the Census Bureau in making a complete return.

The Bureau has agreed to send to each institutional member of the American Hospital Association an original and two copies of the census report. The original will be sent to the Bureau of Census, one copy will be retained for the hospital's files, and the third will be available for the Association.

The importance of having an inclusive census of our hospitals is apparent to all who deal in statistics relating to our institutions. The Census Bureau's report is authoritative, as correct as it is possible to assemble, and more interpretative of the factual results of hospital operation than has been available at any time. The census will do much to eliminate the variety of figures so often quoted, and which are so frequently out of line, and will make for uniformity of reports and accuracy of the resulting statistics.

The 1940 hospital census is the beginning of a program of the Bureau of Census, which eventual-

ly will cover all useful and pertinent statistical data relating to our institutions.

Hospitals will avail themselves of this opportunity to report the scope and character of their services to the community through the 1940 census. They will render the public an important service and will serve their own interests in giving full cooperation to the Bureau of Census in its difficult task of taking the 1940 census.

Clearing House for Association Publications

A recent investigation revealed that twenty-one of the regional and sectional hospital associations publish bulletins, reports, or transactions in some form or other. In order that this material can be made available to all regional and sectional hospital associations, the American Hospital Association in 1938 established what is now known as the Bulletin Exchange Service. By means of this Service, bulletins or other publications of state or provincial associations are sent through the American Hospital Association to the secretaries of the various associations, thus keeping these organizations informed or advised as to their respective activities, accomplishments, or points of view. Sixty copies of each bulletin or publication are sent by the secretary to the American Hospital Association, which, in turn, mails a copy to each of the secretaries of the regional and sectional associations.

This service has been most helpful to the associations and should be encouraged. Every association secretary should make it a point to send at least sixty copies of each publication, mimeographed or printed, to the American Hospital Association headquarters for distribution.

There are today seven regional hospital associations, forty-three state hospital associations, and seven provincial hospital associations. Of the forty-three state associations, twenty-one are now affiliated officially with the American Hospital Association, and several more are revising their by-laws in order to become official and approved sectional associations of the American Hospital Association. Membership in nineteen of these associations is on a joint basis, that is, membership in the state association automatically gives membership in the American Hospital Association.

A stated policy of the American Hospital Association is to encourage and assist its members in the various states and provinces in the formation and development of strong and effective sectional hospital associations. This policy is based on the practical knowledge that a national organization, such as the American Hospital Association, can serve its constituency best if it keeps in continual and close touch with organized local and sectional hospital groups.

Monuments of Service

With the passing of Edward Stephens Harkness on January 29, the United States has lost one of its great philanthropists. Although his benefactions left an enduring impress on scores of universities, colleges, hospitals and other eleemosynary institutions and organizations, he was personally the shyest and most modest of men. It is said that he never made a public speech and never granted an interview. His autobiography in "Who's Who" is ten lines. According to the New York *Herald Tribune*, it is a "moving fact that neither his closest friends and associates nor the directors of his greatest beneficiaries can guess the total of his gifts."

Yet it is conservatively estimated that he bequeathed more than $100,000,000 to charitable and educational institutions in the last fifteen years. He is not only responsible for the so-called House Plans at Harvard and Yale (his total gift to Harvard for the House Plan was $13,365,000), but he was the very rock upon which the Columbia-Presbyterian Medical Center was built. President Butler of Columbia University estimates that Mr. Harkness's gifts to Columbia totalled $30,000,000, including those he made from year to year to the Columbia-Presbyterian Center.

It is believed that only the Rockefellers, Andrew Carnegie, and possibly the Guggenheims have exceeded Mr. Harkness and his mother in the magnitude of their philanthropies. The Boston *Herald* concludes editorially that "it is possible that with Edward Harkness's death the last of the great individual givers has passed."

Minutes of the Meeting of the Board of Trustees of the American Hospital Association

18 East Division Street, Chicago, Illinois
Monday, February 12, 1940

THE MEETING of the Board of Trustees of the American Hospital Association was called to order at 10:00 a.m. by the President of the Association, Dr. Fred G. Carter.

PRESENT:

Fred G. Carter, M.D., *Chairman*
B. W. Black, M.D.
Rt. Rev. Msgr. M. F. Griffin
Peter D. Ward, M.D.
Frank J. Walter
Donald C. Smelzer, M.D.
Asa S. Bacon
Christopher G. Parnall, M.D.
Ada Belle McCleery, R.N.
Ellard L. Slack
George D. Sheats

All members of the Board were present with the exception of Dr. Henry M. Pollock who was absent because of illness.

IT WAS VOTED: That the minutes of the meetings of December 8 and 9, 1939, be approved.

The Executive Secretary reported the introduction of the President's plan for building rural hospitals and of Senator Mead's proposed legislation authorizing loans to hospitals for construction purposes. A discussion of this legislation followed, and the legislation approved.

Dr. Robin C. Buerki, Representative of the committee representing the American Hospital Association on the Advisory Council on Medical Education, was invited to appear before the Board to report on the resolution adopted by the Advisory Council on Medical Education at their meeting on February 11.

IT WAS VOTED: That the Board of Trustees approve the action of the representatives of the American Hospital Association in voting favorably on the resolution of the Advisory Council on Medical Education presented by Dr. Buerki:

"Inasmuch as the internship is now universally regarded as a part of the basic preparation for the practice of medicine and to be fully satisfactory must be integrated with the medical course proper, the Advisory Council on Medical Education recommends that the Association of American Medical Colleges in cooperation with national medical and hospital organizations and the Federation of State Medical Boards and state licensing bodies and after consultation with the Council on Medical Education and Hospitals of the American Medical Association should formulate minimum educational standards for the internship and should prepare a list of hospitals in this country which meet these standards."

The Executive Secretary advised the Board that because of the war embargo there is a scarcity of precision and other scientific instruments. Many of these had been manufactured in Central Europe and this was an important source of supply before the beginning of the European war. The possibility of having the embargo lifted to permit the entry of such instruments has been taken up with the Department of State who will discuss it with the British Government.

The following resolutions passed by the Committee on Coordination of Activities were presented by Dr. Carter for the consideration of the Board:

"RESOLUTION I Recommending that the Board of Trustees authorize the Committee on the Study of Anesthetic Gases to Prevent Explosions to continue its studies as forcefully as possible and that the representatives of the American Hospital Association be authorized to work with Dr. Allen's Committee to raise funds outside the American Hospital Association in whatever manner it can."

IT WAS VOTED: That the Board of Trustees authorize the Committee on the Study of Anesthetic Gases to Prevent Explosions to continue its studies as forcefully as possible and that the representa-

tives of the American Hospital Association be authorized to work with Dr. Wilmar Allen's Committee *without authorization to solicit funds in the name of the American Hospital Association.*

"RESOLUTION II Recommending that the Board of Trustees authorize the Council on Association Development to publish the Manual for Field Representatives in sufficient number for distribution to the field representatives, presidents and secretaries of regional and sectional associations, council members, members of the House of Delegates, and such other officials of the American Hospital Association as desire copies."

IT WAS VOTED: That resolution No. II be approved.

"RESOLUTION III Recommending that the Board of Trustees approve the 'Institutional Questionnaire,' and the 'Institutional Facilities Questionnaire' of the Bureau of the Census; that a request be made by the American Hospital Association to the Bureau of the Census that an extra copy of these questionnaires be sent by the Bureau of the Census in behalf of the American Hospital Association to the institutional members of the American Hospital Association; and that the Chairman of the Committee on Accounting and Statistics of the Council on Administrative Practice be authorized to continue negotiations with the Bureau of the Census to arrange the most effective procedure to this end."

IT WAS VOTED: That resolution No. III be approved.

"RESOLUTION IV Recommending that the Board of Trustees advise the American Hospital Association members of the Joint Advisory Committee to support the suggested amendments to the Social Security Act as follows:

"1 Eliminate the exemption of services performed in the employ of nonprofit religious, charitable, or educational organizations from the coverage under old-age and survivors' insurance program *except* services performed by a member of the clergy or by a member of a religious order.

"2 Make provision that contributions from nonprofit organizations and their employees under Federal Insurance Contributions Act be deposited directly into the old-age and survivors' insurance trust fund."

IT WAS VOTED: That resolution No. IV be approved.

"RESOLUTION V Recommending that the Board of Trustees authorize or consider favorably the possibility of an Institute on Purchasing, to be devoted entirely to matters and procedures of purchasing."

IT WAS VOTED: That resolution No. V be approved in principle and that a specific program for an Institute be submitted for final approval.

"RESOLUTION VI Recommending that the Board of Trustees authorize the publication of the Manual on Insurance Coverage, final copy to be approved by the Chairman of the Council on Administrative Practice."

IT WAS VOTED: That resolution No. VI be approved.

"RESOLUTION VII Recommending to the Board of Trustees that an earnest attempt be made by the American Hospital Association to obtain more adequate and effective publicity coverage at the annual meeting of the Association, that technical assistance be employed by the Executive Secretary in consultation with the Chairman of the Council on Public Education and that the sum of $1,000 be appropriated for this purpose from the budget of the Council on Public Education and/or from other sources."

IT WAS VOTED: That resolution No. VII be referred to the Chairman of the Council on Public Education and the Executive Secretary with power to act.

"RESOLUTION VIII Recommending that the Board of Trustees authorize the publication of the recommendations of the Council on Government Relations with reference to lien laws."

IT WAS VOTED: That resolution No. VIII be approved.

"RESOLUTION IX Recommending that the Board of Trustees authorize the inclusion on the title page of Mr. Emanuel Hayt's forthcoming volume concerning hospital law and legislation in the United States, 'Prepared in collaboration with the Council on Government Relations of the American Hospital Association.' "

IT WAS VOTED: That resolution No. IX be approved.

Dr. Carter presented a request from the Coordinating Committee that the Board of Trustees approve the By-Laws of the Arizona Hospital Association on condition that certain articles therein are reworded to conform with American Hospital Association requirements.

IT WAS VOTED: That the By-Laws of the Arizona Hospital Association be approved on condition that certain articles therein are reworded to conform with American Hospital Association requirements.

IT WAS VOTED: That the nominations of President Carter to the following committees be approved:

Dr. R. H. Bishop, Jr., to replace Rt. Rev. Msgr. Griffin as a representative of the American Hospital Association to the Advisory Council on Medical Education.

E. W. Jones to be added to the Latin-American Committee.

Dr. W. S. Rankin to be added as an American Hospital Association member of the Joint Committee with the American Public Welfare Association.

Monsignor Griffin presented a request from the Administrative Board (composed of the members of the Council on Hospital Service Plans and of the Commission on Hospital Service) that the Board of Trustees give some thought to:

a) Proposition of increasing the Commission by three non-hospital men;

b) Proposition looking to the arranging of a meeting to discuss development of hospital service at the Boston Convention, to which a dozen or more leading industrialists of the United States will be invited as guests, as well as representatives of organizations in the medical field, the American Medical Association, American College of Surgeons, and others.

IT WAS VOTED: That the Board of Trustees of the American Hospital Association accept the custodianship of the funds contributed by the various hospital service plans for the statistical and accounting research program, and for the public education and public relations program.

The Treasurer, Asa S. Bacon, presented the audit of the Association's finances for the year ending December 31, 1939, made by Arthur Young & Company.

IT WAS VOTED: That the audit be accepted and filed.

There has been a great deal of interest shown in organizing a session of women's auxiliary boards of the American Hospital Association. It was agreed that the Chairman of the Membership Committee and the Executive Secretary recommend to the President persons for appointment to a committee on women's auxiliary boards.

Dr. Carter appointed the following Committee on Award of Merit: Asa S. Bacon, *Chairman;* Henry M. Pollock, M.D.; B. W. Black, M.D.

IT WAS VOTED: That this Committee be approved.

Dr. Carter reported the conferences with representatives of the insurance companies in Cleveland and New York.

The meeting was adjourned at 4 p.m. to meet at the call of the President.

The Record Room

One of the best examples of coordination of specialists' findings is the record room of the modern hospital. Here are listed in comprehensive numbers, for comparison and study, the experiences of the various branches of medicine. The findings of one specialty are checked with the findings of another and slowly from a mass of sometimes seemingly unrelated facts, the basic truths of medicine are abstracted for the benefit of all. Even a mere tabulation of the accumulated cases in the record room is an aid. The recording of a number of cases and the results of the treatment of a primary disturbance complicated by associated conditions is of inestimable advantage to the two or more specialists involved. It raises to a higher plane of perfection their ability to treat and diagnose in their respective fields, because this coordination of findings gives the specialists verified data as a basis for their consultation.

—*Joseph J. Stahl, D.D.S.*

Dr. A. G. Engelbach

Dr. A. G. Engelbach, the efficient secretary of the New England Hospital Association, and for the past few years assistant director of Cambridge Hospital, Cambridge, Mass., has been named director of that institution to succeed Dr. Frederic A. Washburn, effective March 1. Dr. Washburn has been appointed consulting director.

The Eastern Maine General Hospital, Bangor, after careful consideration of the system of laboratory charges which has been in vogue in the hospital for a number of years, has made a change from a "flat rate" basis to an individual charge for laboratory test. Not sufficient time has elapsed since the change was made for the hospital to determine what the ultimate result of the change will be, but it is felt that the individual charge is much fairer to the patient and the hospital laboratories than was the old "flat rate" system.

Eastern Maine General Hospital, 1939 *Report*

Midyear Hospital Week in Chicago

THE Annual Midyear Conference of the Board of Trustees and Councils of the American Hospital Association, and the presidents, secretaries and legislative chairmen of state, provincial and regional hospital associations, held in Chicago during the week of February 10-15, was the most important in point of interest and attendance of any of the eight previous conferences.

The first Midyear Conference was held in 1932. Four years ago the attendance was 26 compared to an attendance of 90 at the 1940 conference. Each year this conference becomes of increasing value to the hospital associations and to the hospital field generally.

Council Meetings

On Saturday, February 10, the following councils of the American Hospital Association met in separate and all-day sessions: The Council on Administrative Practice, The Council on Government Relations, The Council on Hospital Planning and Plant Operation, and The Council on Association Development. A review of the minutes of these meetings indicates that these Councils and their committees are now extremely active and that many important studies and manuals are either ready for publication or nearing completion.

Meeting of the Coordinating Committee

On Sunday, February 11, the Committee on the Coordination of Activities met in an all-day session during which the reports and recommendations of the seven councils and the tentative program for the 1940 convention in Boston were considered.

Meeting of the Board of Trustees

On Monday, February 12, the Board of Trustees held its meeting, the minutes of which appear elsewhere in this issue.

The Administrative Board of the Conference on Hospital Service Plans

The Administrative Board of the Conference on Hospital Service Plans, consisting of the Commission on Hospital Service and the Council on Hospital Service Plans held a forenoon session, Monday, February 12, at which committees were appointed for the coming year, and plans were made for a meeting of the conference at the time of the American Hospital Association Convention in Boston.

Conference of State, Provincial, and Regional Hospital Association Officers

The Conference of State, Provincial, and Regional Hospital Association officers convened officially at luncheon on Monday, with a registered attendance of 87. Among the topics discussed were: (1) national legislation particularly with respect to the following three bills recently introduced into congress — (a) the *National Hospital Act of* 1940 (*S.* 3230), authorizing $10,000,000 for the construction of hospitals, (b) the *Health Security Act of* 1940 (*S.* 3246), providing $300,000,000 for loans to public bodies and nonprofit organizations for hospital, water, sewer, stream-pollution control, and related projects and facilities ($100,000,000 of which is set aside for hospital projects), and (c) the *General Welfare Act* (*S.* 3255), providing for national recovery by raising revenue and retiring citizens past sixty years of age from gainful employment and providing for the general welfare of all the people of the United States; (2) the 1940 Convention in Boston by Dr. Charles F. Wilinsky; (3) public education, particularly with regard to National Hospital Day procedures by Dr. Michael M. Davis and Albert G. Hahn; (4) association development by Howard E. Bishop and Dr. Wilmar M. Allen; (5) the accreditation of schools of nursing by the Committee on Accrediting of the National League of Nursing Education by Dr. Claude W. Munger, Rev. John G. Martin and Dr. Eugene Walker.

On Tuesday morning, February 13, the Conference of State, Provincial and Regional Hospital Association officers was again convened. The morning was devoted to a discussion of matters relating to hospital service and to reports from the various states on legislation. The meeting adjourned at 12:30 o'clock.

The Dedication of the Asa S. Bacon Library

At 4:00 o'clock Monday afternoon, some 150 hospital executives from the United States and Canada witnessed an inspiring dedication of the new Asa S. Bacon Library in the American Hospital Association headquarters. The eloquent dedication by the Rt. Rev. Maurice F. Griffin and the

sincere expression of Mr. Bacon's gratitude, interspersed with modest factual reminiscences, will leave an indelible impression on all those who were fortunate enough to attend.

Dinner of the President and Board of Trustees

The president and board of trustees' dinner was held on Monday evening, February 12, in the Club Building of the Palmer House, with an attendance of 97. This dinner, as heretofore, was a most enjoyable and informal get-together. Dr. Carter, conscious of this social spirit, called on David H. McAlpin Pyle, president of the United Hospital Fund of New York, for a short, witty and "meaty" talk.

National Methodist Hospitals, Homes and Deaconess Association Meeting

In addition to these other meetings, the National Methodist Hospitals, Homes and Deaconess Association convened for a two day session, commencing Wednesday, February 14.

All in all, this Midyear Hospital Week in Chicago has become a most important annual assembly to the leaders in the hospital field.

Address Opening the Midyear Conference

ARNOLD F. EMCH, Ph.D., President of Conference

ACCORDING to our records, the first Midyear Conference was held in Chicago in the month of February in 1932, in response to a sentiment expressed at the Thirty-Second Annual Convention in Toronto that "there should be a friendly and frank discussion of hospital problems and plans in the operation of which the American Hospital Association can be of greater service to the different hospital organizations throughout the continent and to the hospital field at large." Thus it becomes apparent that this conference is held primarily for the officers and representatives of all regional, sectional, and district hospital associations of this country and Canada for the purpose of discussing informally the problems and needs of hospitals from the standpoint of the organized hospital associations. It is based on the assumption that hospitals should plan and act jointly rather than separately in working out their mutual problems, and that the presidents and secretaries, as well as the other officers and legislative chairmen of regional, state, provincial and district hospital associations should meet specifically for this purpose at least once a year—at the Midyear Conference.

This conference is an opportunity in more ways than one: it is an opportunity for the American Hospital Association to put its fingers on the pulse of the regional, sectional, and district hospital associations and to learn what are their special as well as the general problems and needs and the points of view of each and every one of these organizations; it is an opportunity for regional, sectional, and district hospital associations to compare notes as to their respective problems, procedures and accomplishments; and finally, it is an opportunity for the hospitals to be represented in a conclave of more than 50 hospital associations which have but one ultimate objective: to help the hospitals to help the community!

Hospital Association Developments Initiated or Furthered Through the Midyear Conference

Let us consider briefly some of the topics which in the last eight years have been brought to the attention of this group for consideration and discussion.

Consultant Service—Consideration was given to the possibility of the appointment of a full-time consultant by the American Hospital Association, who would assist individual hospitals, particularly hospitals under 100 beds, in their various problems. Recognizing the merit of this recommendation, the American Hospital Association added Dr. Warren P. Morrill to its technical staff. It is estimated that the American Hospital Association headquarters today receives in the neighborhood of 1,500 requests annually for information and advice which cannot be answered adequately through the available package library material. The requests cover all manner of subjects in the entire field of hospital administration, from such purely technical engineering problems as the control of corrosion in pipes to the more socio-economic problems such as the number of hospital beds required in a given community. Each of these queries is separately considered such that a specific answer to the individual problem is approached as nearly as available data and experience permits.

Legislative Reference Service — Consideration was given to the desirability of the establishment of a permanent legislation committee with the view towards the standardization of legislation

affecting hospitals in the various states. Since then there has been established not only the Council on Government Relations of which Dr. Claude W. Munger is chairman, but the Joint Advisory Committee of the three national hospital associations, with whose splendid and effective work on national legislation the majority of you are now familiar. The Council on Government Relations is not only responsible for the Legislative Reference Service, which has issued at more or less regular intervals as many as a dozen mimeographed bulletins annually on national, parliamentary, state and provincial legislation, but has studied and is formulating models for a standard licensing law and a standard lien law for hospitals.

Official Association Journal—Consideration was given to the possibility of an official Journal of the American Hospital Association. Permit me to quote from a passage of the minutes of the February meeting in 1932. Dr. C. S. Woods, of Ohio, said: "The bulletin is an excellent journal but it does not adequately represent all hospital activities. The American Hospital Association should have an organ which thoroughly represents hospital workers and hospitals, similar to the Journal of the American Medical Association and other general publications by national organizations. It is difficult to believe that the American Hospital Association will ever be able to speak effectively and authoritatively to the hospital world without a general hospital journal which is owned and controlled entirely by the Association." This recommendation has been adequately and effectively met by the establishment in 1936 of *HOSPITALS*—the official Journal of the American Hospital Association, with a present monthly distribution of 5,300 copies.

Study on Nurse Training—Consideration was given to the possibility of a study on the cost of training student nurses, the value of student nursing service to hospitals, and the feasibility of maintaining nurse training schools economically in the smaller hospitals. In this connection it is a pleasure to report that the Joint Committee on the Costs of Nursing Service and Nursing Education has just completed its study, entitled "Administrative Cost Analysis for Nursing Service and Nursing Education." This is an exhaustive study and invaluable reference which is now in the process of publication. Copies should be available early this year.

Education and Training for Hospital Administrators—Consideration was given to the possibility of establishing a program of education and training for hospital administrators, as well as an accreditation system for hospital administrators of special ability, training or merit. The American Hospital Association accepted at least the former recommendation and, in cooperation with other allied organizations, sponsored and organized the first Institute for Hospital Administrators at the University of Chicago in the early fall of 1933. From the first the response has been such as to make it obvious that the Institute filled a real need both for those who are making them part of an initial training program for hospital administration and for those who wish to avail themselves of these institutes as concentrated refresher courses, embodying the major new developments in the field. The American Hospital Association has arranged for and conducted these annual institutes ever since, and has had a total of 828 hospital executives registered in these sessions.

Hospital Service—Consideration was given to the possibilities of hospital insurance or group hospitalization, and several of these Midyear Conferences devoted considerable time to the discussion of this important phase of hospital practice. You are all of course familiar with the fact that within the American Hospital Association structure, there is today, not only a Commission on Hospital Service which has developed an approval system, now involving 56 accredited nonprofit hospital service plans, but a Council on Hospital Service Plans which is engaged in the study of the more technical and detailed problems which arise in this field.

Library Service—Consideration was given to the possibility of extending the usefulness of the Library of the American Hospital Association such that information available in the Library will be more readily accessible and utilized. The minutes do not indicate precisely what the discussants had in mind as to the ways of increasing the scope and utility of the Library, but it is safe to say that a definite improvement in this direction has been made.

In addition to an appropriation of $500 last year by the Board of Trustees for important and rare books on matters relating to the history of hospitals on this continent, the Council on Association Development included $250 in its 1940 budget for the specific purpose of securing contemporary books and magazines for the Library. Last year the personnel of the Library was increased by the employment of an assistant librarian, who devotes her full time along with the librarian to the library service. The Hospital Library Service, which enables you to secure articles, books, and excerpts on all manner of hospital topics, has been in operation for nineteen years. Last year 7,500 package libraries were sent to 3,000 hospitals, allied organizations, and others interested in hospital

operation. The library is continually adding volumes to its shelves and receives monthly 222 magazines, bulletins and other publications on hospital, medical, nursing, and related subjects.

National Hospital Day—Consideration has been given to the observance of National Hospital Day which, in recent years, has grown to such proportions as to give it the character of a major public relations program.

Under the foresight and able leadership originally of Matthew O. Foley, and more recently of the energetic and beloved Albert G. Hahn, National Hospital Day has become a focal point of an entire public relations program for each individual hospital. The most important aspect of this day has come to be precisely in the fact that it now stresses the every-day character of hospital service, its constant availability and dependability, day and night for every hour, minute, and second in the year.

Association Membership — Consideration was given to the possibility of establishing a more thorough plan of expanding membership in the American Hospital Association and the state or provincial hospital associations. It was urged that there should be greater cooperation between the American Hospital Association and the state or provincial associations and that members should not be accepted by the American Hospital Association from areas where there are geographical section associations except through such geographical section associations. These matters were covered by the adoption of our new by-laws in 1937, which provide for joint membership and dues between the state or provincial association and the American Hospital Association. There are now twenty state associations whose by-laws have been approved by the American Hospital Association. Of these, eighteen states have adopted systems of joint membership dues.

Bulletin Exchange Service—Consideration was given to the possibility of an exchange of all state and provincial hospital association bulletins and publications. Such an exchange system was established in 1938, whereby the American Hospital Association headquarters receives at least 50 copies of each association bulletin or publication and in turn distributes these to each secretary of each state or provincial association. Although this Bulletin Exchange Service is an excellent and useful device for keeping the various associations informed and advised as to their respective activities, accomplishments and points of view, it has not as yet been fully utilized by the majority of our state and provincial associations.

Other Topics of General Interest Considered

These are only some of the topics which have been considered at these Midyear Conferences. Others had to do with the possibility of (a) surveys of the various states when future hospital construction is contemplated in order to prevent as far as possible the over-development of hospital facilities in given localities; (b) the establishment of research laboratories which would set up as standards proven hospital procedures and conduct adequate tests to establish the comparative value of merchandise used by the hospital field; (c) the establishment of a standard single annual report for hospitals required from all institutional members, serving the needs of the American Medical Association, the American College of Surgeons and the various governmental bodies, making it necessary for hospitals to make up special reports for all these various organizations throughout the year; and (d) a plan of newspaper and magazine publicity to acquaint the public of the aims, objects, and purposes of the hospital field and to off-set the unfavorable publicity that hospitals may receive from time to time.

By this brief review of the topics considered and discussed you can see that these Midyear Conferences have been both interesting and useful. In fact, they have contributed to a very large extent in stimulating suggestions and recommendations which have been incorporated into the program of the American Hospital Association.

We are here to make of this, the Ninth Midyear Conference, whatever it is your wish or inclination to accomplish. There are still tremendous possibilities for improvement in the direction of association development; the potentialities for mutual understanding and for joint action in the hospital field are without limit.

"We believe that cheerfulness and gracious service are all-important throughout our personnel. We not only select our employees with this in mind, but we are constantly conducting discussions stressing the importance of this factor."

—*Evanston Hospital,* 1939 *Report*

In 1900 there were 160 medical schools in the United States; in 1938 there were 77 medical schools, a decrease of 83 in number of schools. In 1900 the 160 medical schools graduated 5,214 physicians; in 1938 77 medical schools graduated 5,194, a decrease of 20 in the number of graduates.

Eighth Annual Institute for Hospital Administrators

Chicago, August 28 to September 11, 1940

ELABORATE plans are now in progress to make the Eighth Annual Institute for Hospital Administrators in Chicago one of the most instructive and stimulating educational events ever held in this field. As in former years, it will be conducted under the directorship of Dr. Malcolm T. MacEachern by the American Hospital Association at Judson Court on the University of Chicago campus, with the University of Chicago, the American College of Surgeons, the American Medical Association, the American College of Hospital Administrators, the Chicago Hospital Council and nineteen hospitals in the Chicago metropolitan area cooperating. The Institute will open on August 28 and continue through September 11. It will thus end in sufficient time for those attending to go to the Forty-First Annual Convention of the American Hospital Association in Boston, September 16 to 20.

The proposed list of lectures and seminars includes the following:

Lectures

Hospital Ethics
G. Harvey Agnew, M.D., Toronto: Secretary, Department of Hospital Service

The Art and Science of Hospital Administration
Benjamin W. Black, M.D., Oakland; President-Elect, American Hospital Association; Medical Director, Alameda County Institutions

Administrative Practices
Frank R. Bradley, M.D., St. Louis; Superintendent, Barnes Hospital

The Role of the Hospital in Graduate Medical Education
Robin C. Buerki, M.D., Chicago; Director of Study of Commission on Graduate Medical Education

The Organization of the Hospital
Fred G. Carter, M.D., Cleveland; President, American Hospital Association; Superintendent, St. Luke's Hospital

Business Management of the Hospital
Arkell B. Cook, Ann Arbor; Accountant, University of Michigan Hospital

Management of the Food Service in the Hospital
Margaret Harrington, Detroit; Chief Dietitian, Harper Hospital

Nursing Service and Nursing Education
Sister Henrietta, R.N., New Orleans; Director, School of Nursing and Nursing Service, Charity Hospital of Louisiana

Organization and Management of the Obstetrical Department
Clara M. Konrad, R.N., Jersey City; Director of Nursing and Assistant Superintendent, Margaret Hague Maternity Hospital

Basic Principles of a Public Relations Program
William V. Morgenstern, Chicago; Director of Press Relations, University of Chicago

Medical Staff Organization—Professional Relations and Professional Activities
Joseph G. Norby, Milwaukee; Superintendent, Columbia Hospital
Stanley J. Seeger, M.D., Milwaukee; Chief of Staff, Columbia and Milwaukee Children's Hospitals

Maintenance of the Physical Plant
R. Starr Parker, Cincinnati; Mechanical Director, Christ Hospital

Hospital Accounting—Group Hospital Service
C. Rufus Rorem, Ph.D., C.P.A., Chicago; Director, Commission on Hospital Service, American Hospital Association

Legal Aspects of Hospitals
William H. Spencer, Chicago; Dean, School of Business, University of Chicago

The Small Hospital—Organization, Management, Special Problems
Jewell W. Thrasher, R.N., Dothan, Alabama; Superintendent, Frasier-Ellis Hospital

Personnel Management
(Lecturer to be invited)

The morning sessions will be devoted to lectures and seminars, and the afternoons will be given over to clinical demonstrations provided by the nineteen participating hospitals. Bus transportation will be provided to and from the hospitals.

Round Tables

The evenings will be devoted to open forum discussion on questions arising out of the lectures and seminars and the demonstrations at hospitals, and on problems of hospital administration in general. The round tables will be conducted by Dr. Malcolm T. MacEachern, assisted by visiting lecturers and administrators of local hospitals.

Advanced Group Conferences

Of considerable interest and value this year will be the advanced group conferences to be held each afternoon for those who wish a more personal discussion with authorities on special problems in the various departments of hospital administration. These Conferences will be of especial interest to those who have already attended one or more of the Institute meetings in the last seven years.

As in previous years, there will be a special dinner for the students and faculty which, as always, will provide the occasion for an informal get-together, as well as for the spontaneous program of fun and frivolity which regularly climaxes the social aspect of these memorable meetings.

Living Accommodations

Through an arrangement with the University of Chicago, commodious living quarters and meals will be made available in the beautiful Judson Court on the campus of the University of Chicago. The conference and lecture halls, as well as the huge dining hall, are all conveniently located under the one roof of Judson Court.

With these excellent physical accommodations in the city which is the home of the American Hospital Association, the American College of Surgeons, the American Medical Association, the American College of Hospital Administrators, and many outstanding hospitals, all that is necessary to make this Institute an educational event of first importance in the hospital field is the securing of an outstanding faculty and the building of an interesting and stimulating program. This Dr. MacEachern and his Institute Committee have now accomplished.

The Eighth Institute for Hospital Administrators, building on the foundation of seven previous successful experiences, again offers the hospital executive an unusual opportunity, through its intensive refresher course, to become acquainted with the better practices and procedures of hospital administration and the latest developments in the field.

Since this Institute was first established in 1933, a total of 828 hospital executives have registered for its courses. It is the oldest Institute with the largest total attendance, and the only Institute for Hospital Administrators conducted by the American Hospital Association. As in years past, an effort will be made to confine the total enrollment to 100. Full information and application blanks can be secured by writing to Miss Agnes McCann, Secretary of the Institute for Hospital Administrators, 18 East Division Street, Chicago, Illinois.

Pathogenesis of Hemorrhage in Artificially Induced Fever

Doctors Sloan J. Wilson and Charles J. Doan, in *Annals of Internal Medicine, January,* 1940, report the results of an extensive research on "The Pathogenesis of Hemorrhage in Artificially Induced Fever."

Their conclusions are as follows:

The effect of artificially induced fever on factors important in the coagulation of blood has been studied in experimental animals and in selected human subjects.

A decrease in prothrombin and fibrinogen occurred secondary to liver damage. A decrease in prothrombin may occur without a decrease in fibrinogen.

Artificially induced fever resulted in a relative and absolute thrombocytopenia. The megakaryocytes in the bone marrow showed definite cytoplasmic and nuclear damage. The degree of thrombocytopenia depended upon the extent of the megakaryocytic damage.

The pathogenesis of hemorrhage in artificially induced fever may be followed in orderly sequence: the elevation of body temperature results in anoxia and a depletion of liver glycogen; these factors may result in hepatic and megakaryocytic damage following which there is a decrease in prothrombin and circulating platelets. Fibrinogen may also be decreased. Any decrease in these factors important in the coagulation of blood, contributes to potential or actual hemorrhage.

The regeneration of the damaged parenchymatous tissues apparently takes place quite promptly and completely, the changes being reversible within the usual limits of therapeutic application. Any lack of appreciation of the full significance, however, of the facts of mineral, carbohydrate, oxygen, vitamin and water metabolism in fever therapy might lead to irreversible changes and serious permanent damage or death.

While the questions involved are of a clinical nature, they rate with x-ray burns as a possible source of embarrassment to the hospital, and serve to emphasize the need for both a competent physical therapist and a highly trained and alert physical therapy technician in any hospital using this new and very promising therapeutic agent.

Diseases of Student Nurses

JOHN D. LeMAR, M.D.

ATTENTION has been attracted recently toward health conditions in student nurses because of refusal of hospitalization insurance for this group in certain areas. The reasons for this were listed as extreme frequency of disease among these students and great loss of time as a result, sometimes as much as ten days per student per year.

Accordingly a study was undertaken to determine the extent and nature of diseases occurring in student nurses in five training schools in this area. Details of the training schools and characteristics of time-loss in hospitalization and convalescence will not be given in detail in this paper.

It is enough to say here that the aggregate loss amounted to more than thirty years' time in four years, an average loss of about 9.9 days per case; the financial loss due to this was calculated to be in excess of $55,000. Practically this does not tell the whole story. The lost time was charged against the students and had to be made up, the training schools bearing the cost of the extra days spent in training.

It is the purpose of this paper to analyze the incidence of the various diseases responsible for the time-loss mentioned above.

Collection of Data

The data to be presented were built up from illness records of the student nurses of five training schools. These records cover a four year period, from January 1, 1935, to January 1, 1939, and were taken from nursing office records or from hospital charts. Altogether 1,708 persons are involved in the study.

General Disease Occurrence

In all schools combined, 1,411 cases of illness developed during the four year period. It was noted that the number of cases per unit of time varied greatly between the different schools and in the same school in different years. Though the larger schools generally had more illness than small ones, fluctuations in a given school did not tend to follow population fluctuations. In some years all schools showed an increase of illness or decrease of illness, regardless of the population shifts incident to graduation and the biennial classes of new students. To this extent all schools were somewhat alike, but insofar as the incidence of individual diseases was concerned, there was no such accord. Cases appearing in the individual schools each year are shown in Table One.

The Author

● **Dr. John D. LeMar is on the staff of the Department of Pathology and Bacteriology of the University of Nebraska School of Medicine, Omaha.**

Specific Disease Occurrence

Contagious Diseases of the Respiratory Tract—The diseases classed under this heading included the common cold, streptococcal pharyngitis, scarlet fever, influenza, mumps, measles, chicken pox, bronchopneumonia, lobar pneumonia, epidemic tonsillitis, acute bronchitis, acute laryngitis, nasopharyngitis, german measles and pulmonary tuberculosis. It should be stated that the infections of the tonsils, larynx, bronchi and nasopharynx did not occur as complications of some other preexisting disease, but appeared as primary diseases and usually in the form of small epidemics.

The most important of these was the common cold, occurring in 408 cases, which was 65.4 per cent of the 608 cases classed in this group. Perusal of Table Two will show the relation of the com-

Table One

OCCURRENCE OF ILLNESS PER TRAINING SCHOOL PER YEAR

	Number of Cases			
School	1935	1936	1937	1938
A	27	74	90	87
B	*	131	177	133
C	50	61	49	60
D	11	20	9	9
E	101	92	110	120

*No data available.

Table Two

RELATION OF COMMON COLDS TO ALL OTHER CONTAGIOUS DISEASES OF RESPIRATORY TRACT*

School	*Total Number of Cases*	*Percentage Due to Colds*
A	176	57.4
B	163**	61.3
C	91	65.9
D	20	40.0
E	158	82.2

*1935 to 1938 inclusive. **No data available for 1935.

mon cold to all other contagious diseases of the respiratory tract.

Thus in 608 cases, or 43.0 per cent of the total number, some one of the contagious respiratory diseases was responsible, and in 408 cases, or 28.9 per cent of the whole, the cause of illness was the common cold.

As to the other members of this group of diseases, the second most common was streptococcal pharyngitis (59 cases or 9.7 per cent), the third in frequency being streptococcal tonsillitis (30 cases or 4.9 per cent). Streptococcal infections of the pharynx and the tonsils usually accompanied outbreaks of scarlet fever, being extremely uncommon otherwise. The remaining 20 per cent consisted of all other diseases in this group, there being 15 cases of influenza, 7 cases of mumps, 9 of measles, 6 of chicken pox, 4 of bronchopneumonia, 6 of lobar pneumonia, 5 of acute bronchitis, 6 of acute laryngitis, 4 of nasopharyngitis, 2 of german measles and a single case of pulmonary tuberculosis.

Also much in evidence was the hypersusceptible person, the one who is continually ill with some one of the respiratory diseases. While many students had but one or two colds per year, and fifty-four had none at all throughout their entire period of training, thirty-four had more than four colds per year, ranging as high as twelve. Complications were very frequent among these students, and four of the six cases of lobar pneumonia occurred among them. One of these lost 206 days in a single year, due to illness, all of it, with the exception of an attack of acute appendicitis, being respiratory in nature.

Gastro-intestinal Diseases—There were 191 cases (13.5 per cent of total) of gastro-intestinal disease. Ninety-two of these were made up of gastritis, gastro-enteritis, or classed under the blanket diagnosis of "gastro-intestinal upset." The most frequent disease entity was appendicitis (84 cases). There were 13 cases of gall-bladder disease and one each of bowel obstruction and peptic ulcer.

Metabolic Diseases—There were relatively infrequent cases of metabolic diseases, there being one case of diabetes mellitus, one of hypothyroidism, and one of hyperthyroidism. There was a single case of insulin shock.

Non-contagious Diseases of the Respiratory Tract—Twenty-eight cases of acute sinusitis appeared during the four year period. There were two cases of bronchial asthma, a single case of lung abscess, a single case of suppurative mediastinitis, a single case of empyema complicating pneumonia, and six cases of "pleurisy," not further classified.

Diseases of the Skin—The most frequent of skin diseases were the infections of the hands (53 cases). These were about evenly divided among all training schools. There were 22 cases of furunculosis, 50 per cent occurring in one training school. Other skin diseases included: burns, 7 cases; urticaria, 5 cases; dermatitis venenata, 1 case; eczema, 2 cases; impetigo, 5 cases; erythema multiforme, 1 case, and dermophytoses, 4 cases.

Diseases of the Eye—Refractive errors of which there were many, are not included in this study. Acute contagious conjunctivitis occurred in 13 cases. There was a single hordeolum.

Diseases of Muscles, Bones, and Joints—The majority of these cases were sacro-iliac and lumbo-sacral strains, of which there were 17. Sixty per cent of these occurred in one training school. Less frequent were cases of acute myositis (2), arthritis (unclassified, 6 cases), and unclassified joint injuries (3). There were nine fractures and twelve cases of ankle sprain.

Diseases of Ear and Mastoid—There were 10 cases of otitis media, and three cases of suppurative mastoiditis.

Miscellaneous Diseases

There is a large group of cases which are not otherwise classified. The most frequent of these are classed under "Disease Undiagnosed," of which there were 46 cases. Fifty-six per cent of these occurred in one training school.

There were 15 cases of unclassified injuries. Vaccination reactions (scarlet fever, small pox, diphtheria) accounted for 11 cases of illness. There were 16 cases of disease of the teeth requiring extraction.

Dysmenorrhea accounted for 14 cases: There was a single case of ruptured ovarian cyst, a single inguinal herna, 2 of migraine, 2 of toxic neuritis. Rheumatic fever, streptococcal cellulitis, acute lymphangitis, streptococcal septicemia, teno-

Table Three

THE TEN MOST FREQUENT DISEASES OCCURRING IN THE STUDENT-NURSE POPULATION OF FIVE TRAINING SCHOOLS, 1935 TO 1938 INCLUSIVE

Diagnoses	*No of Cases*	*Percentage of Total Cases*
1 Common Cold	408	28.9
2 Acute Appendicits	84	5.9
3 Gastro-intestinal Disturbance*	64	4.5
4 Streptococcal Pharyngitis	59	4.1
5 Hand Infections	53	3.7
6 Acute Tonsillitis	30	2.1
7 Acute Sinusitis	28	1.9
8 Gastro-enteritis	24	1.7
9 Furunculosis	22	1.5
10 Scarlet Fever	21	1.4

*Vomiting and diarrhea of obscure origin, unaccompanied by fever.

synovitis, herpes zoster and "sciatica" were the diagnoses given in one case each. Some of these obviously are not complete diagnoses.

Relative Frequency of Common Diseases

It is difficult to determine whether or not student nurses suffer from a disease or group of diseases which are truly occupational. The illnesses experienced are no different than those of any other group. They represent the ordinary illnesses that occur throughout the general population. While no one disease can be definitely traced to occupation, it is of interest to see which diseases occur most frequently and their relative position in the list of student nurse illnesses. A list of the ten most frequent diseases occurring in this group is given in Table Three.

It should be stated that back strains, dysmenorrhea, and dental diseases follow these very closely.

A study of the surgical procedures done on this group indicates that the most frequent was tonsillectomy, often without statement of pre-existing tonsillar disease. This would seem to show that tonsillar pathology is much more frequent among the students than the records would lead one to believe. It is interesting to note that 50 per cent of these occurred in one training school.

The second most frequent surgical procedure was that of appendectomy (84), while submucous resections of the nasal septum accounted for 10 cases, the latter all done in one training school. Other surgical procedures were rare, there being three major abdominal operations, two of orthopedic nature, and a number of minor operations.

Comment

A study of the diseases of student-nurse populations is of considerable value in that it makes available illness statistics in a very highly selected and closely controlled group of persons. This knowledge being available, there is an unusual opportunity to study the efficiency of control measures.

It is obvious that were contagious diseases of the respiratory tract brought under control, nearly half of the illness of this student-nurse population would disappear. Some of these, notably scarlet fever, have been completely eliminated in many schools by compulsory vaccination. The worst offender, the common cold, is not yet subject to control. Significant, perhaps, is the relatively low incidence, and short average duration, of colds in those schools where compulsory hospitalization and isolation is practiced. Where this has not been done, there is an excessive incidence, a greatly prolonged time-loss, and a high frequency of complications. Much more study is needed in this important group of diseases.

The hypersusceptible person may be, in effect, a reservoir for some of these diseases. Frequently the primary case in intra-school epidemics occurs in one of these individuals.

Of the second most important group of diseases, those of the gastro-intestinal tract, there seems to be little likelihood of bringing about any great change by preventive measures.

Infections of the hands, long regarded as common among nurses, are relatively infrequent compared to diseases of the nose and throat, yet they stand fifth in the list of the common diseases of nurses. It seems likely that many of these are preventable.

The problem is large enough and important enough to warrant a survey in every training school. Further study is needed here and there should be correlative studies made in other institutions with comparable populations.

Summary

A study of the illnesses of student nurses reveals the following facts:

1 The common cold was the most frequent disease, accounting for more than 28 per cent of the cases. The second most frequent disease was acute appendicitis.

2 The most frequent disease-group may be classed as contagious diseases of the respiratory tract, second being those of the gastro-intestinal tract.

3 Illnesses of student nurses present problems of great magnitude in the majority of training schools. Further study of the conditions bringing this about and further efforts toward disease prevention are needed.

Pioneering and Developing a Private Hospital, Unit by Unit

MARY JANE CURRIE

THE San Pedro General Hospital was incorporated under the laws of California as a stock company April 28, 1924.

Soon after they were released from the World War, some eighteen young doctors settled in San Pedro, opened their respective offices, and commenced the general practice of medicine, as well as surgery and obstetrics. There were no hospitals in San Pedro at this time, doctors having to take their patients through heavy traffic to Long Beach, California, a distance of eleven miles. They appreciated this procedure was as bad for the patients as it was for themselves and the development of their individual practices.

The San Pedro General Hospital was organized by these young men, with the advice of two older doctors who had been residents of San Pedro for many years, and with the support and encouragement of enterprising citizens. The purpose was to provide their city with a modern hospital, if this objective could be accomplished on an ethical, self-supporting basis.

A beautiful site comprising twenty lots was chosen in the Palos Verdes Hills above the city. While it is but a short distance from the business section, it is at the outskirts of the city and overlooks the wonderful Los Angeles Harbor.

The First Building

The building was to be of brick and cement, making it fireproof throughout. It was to be built in units one story in height, with patios between each unit so as to afford sunshine and fresh air in every room and ward.

The first wing of the hospital was formally dedicated and opened on June 14, 1925. It contained accommodations for eighteen patients, with two operating rooms, a pathological laboratory, x-ray rooms, kitchen and other modern facilities.

In April, 1935, while the first unit was still under construction, I was engaged to take charge of this institution. It was learned soon after it was opened that this wing did not furnish sufficient accommodations for the community. The crowded condition of the hospital was called to the attention of one of our staff and hospital directors, who immediately set to work to invest sufficient money to provide for two additional wings to accommodate eighty-five more patients.

The Author

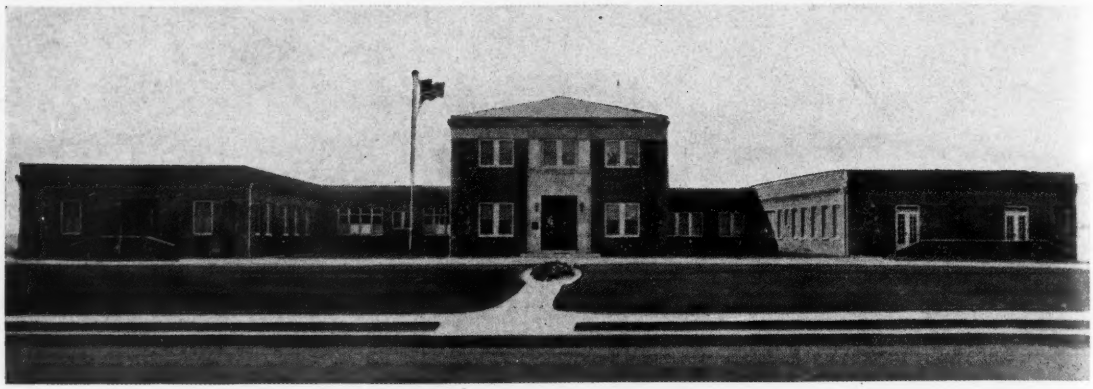
● Mary Jane Currie is the Administrator of the San Pedro Hospital, San Pedro, California.

The Development of New Units

In one of the new wings a unit of twenty-two beds was set apart for obstetrical cases, with two delivery room, sterilizing room, and other necessary accommodations. In this department each mother has a private room. Bathroom facilities are provided between each two rooms. It has two nurseries, a formula room and a store room for separate sterile supplies, a nurses' work room, and a chart room.

The births in the hospital annually average 536. We have an inclusive ten-day rate of seventy dollars for all obstetrical cases. This charge cov-

The First Building



San Pedro Hospital, as It Is Today

ers delivery room, nursery, supplies and pathological analysis. This rate has not been changed since 1925. The department experiences a satisfactory bed occupancy almost all of the time. Registered nurses are on duty at all times, with two maids to do the cleaning, caring for flowers, renewing drinking water, serving nourishments, etc. Food trays are served by the nurses. All nurses on this ward have special training in obstetrics and do not work in any other department of our hospital. A straight eight-hour nursing duty is employed.

The Nursery and Delivery Rooms

The nursery has three registered nurses on duty covering twenty-four hours. Delivery rooms are in charge of two registered nurses, with the night supervisor being responsible for one eight-hour shift. When an infant is isolated registered nurses are responsible for all of its care, both days and nights.

The Food Service

Owing to the growth of the hospital it was necessary to enlarge our kitchen with a central food service. Connecting with this is our refrigeration rooms for poultry, eggs, milk, meat and other dairy products. We have a separate refrigeration for vegetables and fruits. There are also reach-in sections for salads and ice-cream. In this semi-tropical climate we find that we can prevent deterioration of rubber supplies by keeping them in a refrigerated compartment.

The Laboratories

The pathological laboratory had to be enlarged as well as our x-ray department. Both of these departments have a licensed technician, with a medical director in charge.

Our Rates

Our one aim was service to the community at as low a cost as was possible to give good service. Our private rooms are seven dollars and fifty cents per day with all registered nursing service. Two-bed rooms are five dollars and fifty cents per day. Ward rates are four dollars and fifty cents per day. Flat rates have proved their worth in carrying out this aim of our hospital.

The Business Office

The business office is thoroughly up to date in every detail. All patients are admitted through this office. All data concerning patients, needed for our records are taken by the admitting clerk. Each patient is requested to make a deposit or special arrangements for payment. The patient is placed in the hands of the supervising nurse of whichever department he is to be assigned. All finished records are signed by the doctor in charge and returned to the record room by the supervisor.

The four service departments, all of which are essential to the welfare of our patients, that have contributed most to the aid of the doctor and surgeon are the pathological laboratory, x-ray department, dietitian and die laboratory.

The Central Supply Room

A central supply room was enlarged in 1937. This room service has developed into a major department with a registered nurse in charge. All trays and sterile supplies are requisitioned by the floors from this central unit.

A flat rate is placed on all supplies. Major trays are one dollar, minor trays are seventy-five cents. Sterile gloves are twenty cents a pair. Glucose and normal saline solution is sixty-five cents for one thousand c.c., etc. These rates are made to our patients. Doctors can use this service for outside private patients or for their office when necessary.

During 1937 our drug store was enlarged and a registered pharmacist placed in charge. This has greatly improved the drug service for our patients. Pharmaceutical solutions and in fact many drugs are supplied and made in this department. Doctors can buy their drugs, syringes, gloves and almost all of their supplies from us. The pharmacy adds to our revenue. Our staff doctors find

it both economical and convenient to use our pharmacy.

Our stock rooms, where all supplies are stored, are kept in perfect order. All supplies are requisitioned from this unit and inventories are made monthly. This keeps our cost per patient day down to a lower figure.

At present we do not have our own laundry. A local laundry cares for our linen. Plans for installing a hospital laundry have been completed and approved. The laundry cost per month is $429.52. The laundry cost per patient day is twenty-two and three tenths cents.

The Fiscal Audit

An audit is made annually by a public accountant. It is one of our greatest helps. It guides us in our development and in controlling our expenditures. It shows to our directors that our financial practices are sound and carried on in a business-like manner.

The Hospital Pays Dividends

It has generally been possible to pay from two to three per cent interest to our stockholders, during the fourteen years of our existence. This is a sound practice. When we borrow money from our local bank we pay four and one-half per cent interest, as well as the covering insurance and fire insurance and earthquake insurance on the money we borrowed. During 1934 the damage caused by the earthquake cost many thousands of dollars and caused our directors much concern in replacing the damage done. However, we have overcome that deficit.

Our Operating Rooms

In 1936-37 our surgical department was enlarged. Modern surgical lighting was installed. It was air-conditioned and electrically heated. New equipment was installed, giving us three modern surgeries with facilities for any type of major surgery which may be done, day and night.

The fracture service in our hospital for industrial and other cases is located in a ten-bed ward. This service is controlled by a fracture committee of medical men. This unit is fully equipped with a complete splint room and carriage containing all the appliances for immediate use. A portable shock-proof x-ray machine is included in this department, as well as diathermy, deep therapy, ultra-violet, heat cradle and traction equipment of all kinds are available. This unit adjoins our orthopedic operating room.

This part of the hospital provides space for United States Public Health medical and surgical patients. Care and treatment is given by the United States Public Health surgeons. The San Pedro Hospital has been utilized for patients in the Army and Navy service needing special institutional care. Some twenty beds are given over to these patients, including eye, ear, nose and throat surgery.

Summary of What This Hospital Has Accomplished

San Pedro Hospital has been responsible for the beautiful streets that pass its doors, increasing the convenience of transportation of children to a

The Nursery

Entrance to the Original Unit

modern school just beyond the hospital where they can go with a degree of safety. It has been an asset to community property in as much as modern sewerage, lighting, telephone lines and gas connection are to be found in every block of its adjoining areas. It is a community enterprise in which every citizen has taken a deep and interested pride, as is evidenced by their patronage.

Our hospital is accredited by the American Hospital Association and by the Americal College of Surgeons, as an approved hospital.

The hospital accommodates 110 beds. The average payroll per month is $4,593.43. Christmas bonus to all employees amounted to $605 in 1939. There were 2,301 patients admitted during 1939. The average cost per patient day was $5.47. Laundry per patient cost twenty-two and three-tenths cents. Cost per meal twenty-one and eight-tenths cents. This includes raw food, fuel, light, laundry, water and salaries.

And so from a small beginning of twenty beds our hospital has been developed unit by unit until we can conveniently care for more than one hundred patients. Where no hospital existed fifteen years ago, a modern hospital has been developed for our city, and twenty-three hundred of our friends and neighbors come to it each year for care.

Food Poisoning

An analysis of seventy recorded outbreaks of food poisoning in the United States Navy, involving 5,678 individuals, showed the suspected or proven gross causes to have been as follows:

Food intrinsically poisonous	4
Food contaminated prior to preparation	2
Food contaminated between time of preparation and time of consumption	43
Causes undetermined	5
Details of preparation and handling not given	16

It is thus apparent that in at least sixty per cent of the outbreaks the contamination took place between the time of preparation and the time of consumption. Of the remaining forty per cent of cases in which the time of contamination was not determined, it seems reasonable to assume that at least seventeen per cent were contaminated during the similar period—a total of seventy-seven per cent to be charged to this period. The foods involved were mainly chicken, ham, hash, or tongue.

Whether chilled or exposed to room temperature, masses of meat more than eight inches deep are not sufficiently chilled through in a matter of hours to materially delay bacterial growth.

The time element is the one outstanding feature of all this type of food poisoning outbreaks. The introduction of the infecting agent is not completely controllable. Many organisms of low virulence may be harbored by the individual without his being aware of it, but when given such a hospitable medium as warm food these same organisms may multiply and grow prodigiously.

Following recommendations should be observed:

1 Cleanliness of food handlers should be stressed, both as to personal appearance and work habits

2 Proper instruction in the detection of food spoilage, deterioration, or infection

3 Time elapsing between preparation and consumption of food should not exceed four hours

4 Cut, ground, or sliced meats should be placed in shallow pans, and immediately chilled to obtain low temperature throughout the mass

Organization and Operation of Volunteer Service in a General Hospital

PAULINE L. LEHRBURGER, Ph.B.

FOR eleven years the services of a large number of volunteer workers have been utilized by the Beth Israel Hospital, Boston, Massachusetts.* During this period there has been developed a volunteer service organization which the hospital administration considers an asset, as measured by services rendered and by increased communal understanding and good will.

The experience of these years has demonstrated that many vexing problems inherent in the employment of volunteers will yield to thoughtful planning. The plan of organization and operation of the volunteer service which functions effectively in this hospital is presented, since it may be useful as a guide to others.

Organization

The Volunteer Service Department

All non-medical volunteer service is organized as the function of a volunteer service department. This is an independent department of the hospital, self-governing, and responsible only to the hospital administration. All volunteer workers are regarded as members of this department, even including those volunteers who may be professionally trained as nurses, dietitians, social workers, technicians, or pharmacists. Thus, volunteer service receives the centralized, unified control, which is essential for the maintenance of standards and policies, and for the allocation of responsibility.

The volunteer service department works in close cooperation with the out-patient and social service departments. Such cooperation, made effective by means to be described later, is necessary to the harmonious relationship of volunteers and paid personnel.

The Director of Volunteer Service

Status: The volunteer service department is headed by a paid director of volunteer service, who is appointed by the director of the hospital and is directly responsible to him. The independent status accorded the post of director of volunteer service contributes much to the willing acceptance by volunteers of her authority, and to the respect with which paid personnel regard her position. She is on duty during those hours when clinical and other important volunteer services are operating, and she works throughout the year with only the customary vacation period granted other hospital workers. It is largely because of the necessity for such regular, year-round attendance, that the post of director of volunteer service is on a salaried rather than a volunteer basis.

Duties: The director of volunteer service is responsible for the conduct of all non-medical volunteer work. She provides volunteer workers for those services which the director of the hospital and the heads of departments may deem desirable for volunteers to undertake, gives supervision to the volunteers in the out-patient department, and indirect supervision to all other branches of volunteer service. A more detailed outline of her duties will appear in the subsequent presentation of methods of operation.

Joint Planning: Since the services of volunteers must be coordinated with other work in the department in which they serve, the director of volunteer service plans jointly with the heads of departments. Frequent conference with the director of the out-patient department is particularly valuable in the solution of difficulties, and in making volunteer service in the out-patient department a well integrated part of the out-patient organization. Similarly, conference with the hospital librarian serves to make the library service more effective.

Qualifications: The minimum qualifications for

The Author

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*The Beth Israel Hospital is a teaching hospital for the Harvard and Tufts Medical Schools. It has 215 beds, and in 1938 its Out-Patient Department treated 11,726 different patients who made a total of 67,037 visis.

a director of volunteer service may be briefly described as follows: (a) ability to organize and direct women in volunteer work—that is, executive capacity and understanding of personality; (b) awareness of the social implications of medical problems, with consequent appreciation of the care to be exercised in the relationship of volunteers to patients; (c) knowledge of the functions and significance of the professional services within a hospital, with consequent understanding of the appropriate function and conduct of the non-professional volunteer, particularly in her relationship to these services.

Although professional training may be valuable, it is by no means a necessary qualification. Probably as good a training and testing-ground will be found in successful work in women's organizations or in other forms of non-professional communal service. Such fields provide a broad background of contacts, knowledge of community relationships, and experience in working with women in volunteer capacities.

The Advisory Committee on Volunteer Service

The general policies governing the operation of the volunteer service department are formulated by an advisory committee, which consists of the director of the out-patient department, the director of social service, a non-staff member, and the director of volunteer service. Conferences of this policies, but also to bring up problems for frank committee serve not only to clarify and establish discussion and cooperative solution.

Supervisors and Chairmen of Groups

The volunteer group shares responsibility by assisting the director with executive duties. Volunteer chairmen direct and supervise the surgical dressings service, library service, and reading to children, and assisting supervisors aid in supervising the out-patient department services. These chairmen and supervisors meet with the director to consider volunteer problems, thus providing an expression of the volunteer viewpoint and help in solving many difficulties.

Operation

The Services Performed by Volunteers

Types of Service: The following services are delegated to the volunteer service department:

Surgical dressings service—making of surgical dressings and sewed articles of equipment

Library service—distributing magazines and books to patients

Reading to children in the wards

Office service—typing, filing, other assistance

Laboratory service—giving general information, assisting new patients, clerical assistance to admitting officer

Out-patient record room service—filing of records, other assistance

Paging—escorting patients, carrying records

Clinic technical aid—for example, giving scratch tests

Clinic secretarial service—serving as clerks in all clinics

Motor service—transporting patients and social workers

Special assignments—for example, assembling and collating data for reports and studies

All of these services can be performed satisfactorily by volunteer workers who are properly trained and supervised. Undoubtedly there are other services which might be carried on by volunteers with equally satisfactory results.

Definition of Duties: The work to be performed by volunteers is clearly defined in agreement with the heads of departments, and an outline of these duties is set down in a "procedure book." This careful definition serves not only to guide in training the volunteer, but also to insure against the volunteer service department assuming any duties not assigned to it and to assure the performance of all expected services.

For those volunteers who work in close association with doctors, nurses, and social workers, as in the out-patient department, it is important to outline not only the volunteer's own duties, but also the function of these staff workers. For example, a clinic secretary, so instructed, is unlikely to invite or encourage from a patient those confidences which properly come within the relationship of doctor or social service worker and patient; on the other hand, she will be able to recognize when a patient's reactions or conversations indicate the need of referring him to a social worker.

Finally, the definition of every volunteer's duties emphasizes the obligation which the volunteer has in common with the doctor, nurse, and social worker, to preserve as completely confidential all that concerns the patient. In particular, respect for the confidential nature of the medical and social record is a primary duty.

Amount of service: Volunteers are accepted for varying amounts of service, ranging from two to forty-four hours per week, and for periods ranging from a few days to unlimited months. The hours and the duration of service pledged are important only in relationship to the work to be done. Since almost all of the volunteer services function only in the morning hours of clinic activity, and since the library, surgical dressings and reading to children services require only a few hours of the day, it is seldom necessary for a volunteer to work more than three hours in any day. Neither is it necessary for a volunteer to give daily service; for the library and surgical dressings services operate on a three day per week schedule; other services, such as office assistance, can be divided among several workers, each of whom gives two or three days per week. Effort is made to have the same volunteer cover the same clinic each day that it meets, but many clinics meet only once, twice, or three times a week, so that the clinic secretaries need attend on only an equal number of mornings; service in clinics which meet daily may be divided among two or more volunteers. In the matter of duration of service, it is possible to accept services with a time limit of a few weeks or months, and to adapt them to such volunteer jobs as substituting in vacation periods or accomplishing special clerical tasks.

Table I indicates the yearly and monthly distribution of workers and hours in the various services. In interpreting these figures it should be remembered that hours are not always the most significant measure of a service; the library service, for example, might be better measured by the 3,103 books circulated in 1938, and the surgical dressings service by the 500,000 dressings made.

TABLE I
DISTRIBUTION OF WORKERS AND HOURS IN DECEMBER, 1938, AND FOR THE YEAR, 1938

	Number Workers Dec. 1938	*Total Workers Year* 1938	*Number Hours Dec.* 1938	*Total Hours Year* 1938
Library Service	11	17	61	685
Reading to Children	5	8	23	232
Surgical Dressings	64	200	449	4,699
House	..	..	243	3,353
Laboratory	..	2	..	..
Office assistance	7	30	..	..
Out-Patient Dept.	..	..	1,438	14,759
Office assistance	4	4	..	..
Information serv.	4	5	..	..
Record Room	9	15	..	..
Laboratory clerical	2	5	..	..
Clinic technical	2	5	..	..
Page	3	11	..	..
Clinic Secretarial	50	110	..	..
Motor Service	2	3	not estimated	
	163	415	2,214	23,728

TABLE II
NUMBERS OF CONTINUING AND NEW WORKERS, 1938
(For all services except Surgical Dressings)

	For the year	*For December,* 1938
Workers continuing from 1937.....	112	68
Workers reinstated from previous years	3	3
Workers accepted in current year.....	100	30
	215	101

TABLE III
CAUSES OF TERMINATION OF SERVICE, 1938
(For all services except Surgical Dressings)

	Workers new in 1938	*Workers enrolled prior to* 1938	*Total*
Accepted for summer work only..	26	3	29
Accepted for temporary work only	9	2	11
Accepted for trial only	12	..	12
Paid work secured.....	17	9	26
Illness of worker or family.....	..	10	10
Return discouraged by Director of Volunteer Service	..	4	4
Various reasons, but intending to return	1	6	7
Reason not known.....	3	10	13
	68	44	112

TABLE IV
YEARS OF PREVIOUS SERVICE OF REGULARLY ASSIGNED CLINIC AND INFORMATION SECRETARIES AS OF 1938
(Exclusive of summer and substitute secretaries)

Years of service	*Number of secretaries*
10	3
9	3
8	6
7	3
6	1
5	1
4	2
3	2
2	6
1	12
Less than one year	5

Tables II, III, and IV present facts relative to duration and continuity of service in all branches except the surgical dressing service. These Tables should be interpreted in relationship to each other. Whereas Table II shows that in 1938 nearly half the workers were new in that year, Table IV shows that almost the entire personnel assigned to positions of greatest responsibility had long records of continuous service. Whereas Table III shows that approximately half the year's total of volunteers terminated service in 1938, it should be noted that two-thirds of those lost were understood to be only temporarily or tentatively enrolled.

Recruiting, Selection, and Placement of Volunteers

Sources of Volunteer Workers: Volunteer work-

ers will seek service in a hospital where the volunteer service department is soundly organized and directed. At the Beth Israel Hospital, no recruiting or special effort is required to enlist a sufficient number of applicants. Volunteer service is open to all, and volunteers come from various age, social, and economic levels. A substantial number enroll from the membership of the women's auxiliary of the hospital; college girls offer service in the summer when regular volunteers are on vacation; high school girls perform miscellaneous services on Saturday mornings; secretarial schools place girls for training supplementary to their courses; college appointment bureaus recommend students for work experience; the Volunteer Service Bureau of the Council of Social Agencies refers applicants seeking opportunity for volunteer work; girls with business training volunteer in order to maintain skills until a paid job is secured; the Red Cross sends graduates of its course for hospital volunteers; nervous persons enter volunteer work as therapy, upon recommendation of their doctors; or the word is merely passed from friend to friend. Thus, volunteers come from many sources, are variously motivated, and differently equipped. The Beth Israel Hospital, supported principally by the Jewish community, naturally attracts volunteers from the Jewish group, but welcomes among its workers those of other faiths.

Selection and Placement: Every effort is made to select and place volunteers with the same care as would be exercised in the employment of a paid worker. For this purpose, the applicant for volunteer work fills out an application blank, stating educational background, experience, interest, and references. The director of volunteer service supplements this with a personal interview, in which she estimates the abilities, motives in volunteering, and personality of the applicant. Only those applicants are accepted who may be expected to perform the required work satisfactorily.

The only exception to this interviewing procedure is in the case of persons professionally trained as nurses, dietitians, technicians, social workers, or pharmacists, who may desire to work as volunteers in their respective fields; these are interviewed and placed by the heads of the departments concerned, but they function as members of the volunteer service department.

It is frequently possible to suggest to an applicant a type of service for which she is better fitted than that for which she applies. Nevertheless, it is often necessary to reject an application. Under such circumstances, the applicant is told that her application will be filed, and that she will be notified if an opportunity for service arises.

Table V illustrates the disposition of applications in a year.

TABLE V
DISPOSITION OF APPLICATIONS, 1938

Accepted and placement made	100
Accepted and placement delayed	12
Withdrawn by applicant	13
Not accepted	31

When an applicant has been accepted, she receives an assignment to a post only after she has served a trial period in that post. If it then becomes apparent that she is unfitted for the work, she may be tried in some other form of service. If she is found to be unfitted for any available service, she is dropped. This can be done without creating ill will, for the recruit has not been promised an appointment, and she understands that she is learning only in order that she may be considered for a possible vacancy. A guiding principle in the selection of volunteers is that the integrity of the service must never be sacrificed to personalities.

Supervision of Volunteers

Responsibility: Responsibility for the general supervision of all forms of volunteer service, except that of professional workers serving in their own fields, rests with the director of volunteer service. Professional workers volunteering in their own fields are supervised by the heads of the departments concerned. All other volunteers receive direct or indirect supervision from the volunteer service department.

Method: Close supervision of volunteers is maintained by the following means:

The out-patient information service, out-patient record room service, and out-patient office service, paging service, clinic technical service, and clinic secretarial service are directly supervised by the director of volunteer service and her assisting supervisors. The director is at her desk sufficiently early each morning to rearrange assignments if there should be any unexpected absence of volunteers; during the hours of clinic activity, she moves about among the workers, and is always available to them when questions arise in the performance of duties. Through such close supervision numerous difficulties are promptly resolved, and many problems are avoided by anticipatory action.

The laboratory service, motor service, and office service to departments other than the out-patient, receive direct supervision from

the heads of the departments served, but problems, such as those of attendance, deportment, and quality of performance, are referred to the director of volunteer service.

The library, reading to children, and surgical dressings services are supervised by their respective volunteer chairmen, who consult frequently with the director of volunteer service.

Unity: Unity of supervision and personnel is promoted by two meetings a year of all volunteers. Although these meetings are social in nature, the program stresses standards and ideals of service, and the director of the hospital is present to express the administration's appreciation of the work done. Such meetings are important in maintaining volunteer interest and cooperation.

Training the Volunteer

The responsibility for training the volunteers rests with the director of volunteer service. However, the actual training of new workers in the surgical dressings, library, and reading to children services, is undertaken by the chairmen of the respective groups; the volunteers in laboratories and offices are shown their duties by those in charge of the work they will undertake. All other volunteers are trained by the director of volunteer service or her assisting supervisors.

Volunteers are trained individually. Although group training may be used to impart background material, standards, and attitudes, the techniques and procedures involved in the majority of the volunteer jobs are taught individually.

General Instruction in the Organization, Place, and Standards of Volunteer Service

The following typical training program for a clinic secretary will serve to illustrate the method used: The recruit is given a leaflet describing the organization of the Beth Israel Hospital Volunteer Service, rules for attendance, uniform, deportment, relationship of volunteer to professional personnel and patients, and the general attributes of a good volunteer. After she has studied this material, the main points are reviewed with her. She is also instructed in the following regulations which contribute to the efficiency and good morale of the group and the hospital.

Registration: All volunteers register at the time of their arrival and departure each day. Time cards are kept for each worker, thus providing a clear picture of the amount and regularity of service. (Volunteers welcome this record as an indication of the importance to the hospital of their work.)

Uniform: Regularly assigned volunteers purchase and wear a volunteer service uniform, distinguished by its color and inscription on the sleeve. Graduates of the Red Cross Hospital Service course purchase and wear the Red Cross "Gray Lady" uniform.

Authority: All misunderstandings between volunteers and office or professional personnel are brought directly to the director of volunteer service and should not be discussed by volunteers with doctors, nurses, social workers or office staff.

Instruction in the Functioning of the Out-Patient Department

The director of volunteer service discusses with the recruit the purpose of an out-patient department, the process of admitting an out-patient, the general routine of out-patient care, the functions of the medical, nursing, and social service staffs in the out-patient department, and the place of the volunteers in the out-patient department.

Training for specific duties: The prospective clinic secretary is first assigned to watch an experienced secretary for at least four clinic sessions, during which the various procedures are explained. She is instructed to respect the confidential nature of the patient's record and of all else pertaining to the patient's visit. She is next assigned to share the clinic secretary's duties, and then is placed alone in a clinic which has a simple clerical routine. If her work is satisfactory, she is considered ready for placement.

Supplementary training: Clinic secretaries and other volunteers in the out-patient department are urged to take the course in hospital service, which is given by the local Red Cross Chapter. The course comprises ten lectures dealing with hospital organization, hospital ethics, patient psychology, out-patient department services, medical social service, and standard of conduct and service by volunteers. Graduates of the course are known as "Gray Ladies"; although they constitute a unit of the Red Cross and are responsible to a Red Cross chairman, they are also responsible to the volunteer service department and remain under its direction. Volunteers who do not wish to become "Gray Ladies" are permitted by the Red Cross to attend the lectures as visitors. If such a course were not available in the community, it would be advisable for the volunteer service department to provide one; for it serves not only to impart important information, but also to promote length and continuity of service by enhancing the volunteer's sense of the value of her work.

Reading lists: Lists of reading materials pertinent to hospital volunteer service are available to those interested.

Achieving Continuity of Service

Undoubtedly the most vexing problem in volunteer organization is the frequency of absence among volunteer workers. Yet this problem, like so many often thought to be impossible of solution, will yield to analysis and treatment.

In a disciplined volunteer organization an absence without notice or reasonable excuse will be rare, for it is understood to be in violation of rules. However, in interpreting what constitutes a "reasonable excuse," the director of volunteer service must always remember that the service is voluntary, and that, under any form of organization or discipline, the rate of absence in a volunteer staff will be higher than among paid workers.

For this reason the volunteer organization is planned to cope with an expected incidence of absence. Volunteer "alternates" are appointed to be on call, so that they may fill the places of volunteers who have given notice of intended absence. However, because it is the unexpected absence which is most difficult to deal with, particularly in the posts of clinic secretary, it is even more helpful to appoint daily "alternates," who report without assignments and are thus available to fill last minute vacancies. To encourage the regular attendance of these alternate secretaries, it is essential that work be given them when they are not needed in clinics. Consequently, clerical tasks are reserved for them, which can be deferred when clinic service is needed.

Similarly, the problem of vacation absences must be met with forethought. It should be expected that many volunteers will absent themselves during the summer, and sometimes for several weeks in the winter. Therefore arrangements are made well in advance of vacation periods, for the training and placement of college students and others who will serve as substitutes.

In dealing with every phase of the attendance problem, one objective should be kept in mind: continuity of service must be provided even when continuity of personnel cannot be maintained.

Summary

A method of organizing and directing the services of hospital volunteers is presented. Although the exact form of volunteer organization which any institution may establish will vary, important contributions to its effectiveness will be made by:

Unification of all volunteer services, centralized control, and the placing of executive responsibility in a director of volunteer service.

A director of volunteer service who is qualified to organize and direct women in volunteer capacities.

Clear definition of the scope and nature of the services to be performed by volunteers.

Careful selection, placement, and training of volunteers, guided by the principle that the integrity of the service is paramount.

Daily and close supervision of volunteers.

Devices of organization which will provide continuity of service in spite of changing personnel.

I am happy to acknowledge my debt to Dr. Harry A. Derow, Director of the Out-Patient Department, for his encouragement and valuable advice in the preparation of this paper, and to Miss Ethel Cohen, Director of the Social Service Department, for her many helpful suggestions.

Hospital Budgets

Hospitals operate on a yearly budget. The budget is built up from the current financial experience of the institution as a whole, but too often little consideration is given to the specific services individual departments will be required to render within the budget allowance.

The budget does not set limits which should not be exceeded in controlling the expenditures of the several departments of operation in relation to the number of units of service to be rendered. This is because an unknown quality prevails—how many units of service will a department be required to provide? The budget is worked out with the advice and approval of the department head. It is his promise to operate his department for a given sum, but the unknown quantity—service units—is usually beyond his control. Frequently the expenses which are more or less constant, regardless of volume of service, are a small part of a department's total budget. However, within his control are the direct expenses, and for these he is responsible.

Increased expenditures may or may not mean inefficiency or waste. They may be occasioned by a larger volume of service. But in any event the increase must be explained.

—*William A. Dawson.*

Education for Physical Therapy Technicians

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HOSPITAL authorities should be familiar with the training of physical therapy technicians so that they may be able to evaluate the qualifications of those to be employed in the department of physical therapy of their hospital. They should also be acquainted with the recognized registries and other sources which require high standards of training when considering applicants for the positions in hospital physical therapy departments.

Education of physical therapy technicians may be divided into three periods: (1) preliminary education; (2) specific education; and (3) advance education which should be continued indefinitely.

Development of Education for Physical Therapy Technicians

Previous to the entrance of the United States into the World War, the only available training centers in this country for physical therapy technicians were a few hospitals and privately owned institutions. No standards of curriculum or entrance requirements for students were established. The use of physical therapy in the treatment of war injuries called for many more persons with training in this profession than were available at this time. To meet the demands of this emergency, an organization known as the Woman's Auxiliary of Medical Aides was formed on December 31, 1917, as a subdivision of the Medical Department of the Army and under the direction of the Division of Orthopedic Surgery. Its purpose was two-fold: (1) rehabilitation of men, by restoring physical function; and (2) empty beds for oncoming patients, accomplished by physical therapy and occupational therapy.

Plans were made for schools for training—the first at Walter Reed Hospital. This one school could not meet the demand and nurses could not be spared for this work, so pleas were sent to schools of physical education to organize courses to meet the requirements outlined by the Surgeon General's Office. A period of not less than four months' training was required. Fourteen schools and colleges responded to this request and before the close of the war nearly 2,000 women were trained.[1] A few of these courses continued under civilian management after the war and several new schools and courses were organized, some of which offered scientific thorough courses with high standards of entrance requirements. Electrical equipment manufacturers took advantage of the increasing demands and advertised as physical therapy courses training of a few weeks' duration, which consisted solely of the technic of operation of the electrical apparatus sold by that particular manufacturer.

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The establishment of courses to meet the requirements of the Medical Department of the Army was the first effort toward any organized standards of education for physical therapy technicians. In comparison to education in allied professions, the progress of educational standards for physical therapy technicians has been satisfactory considering the short period of duration—a little more than twenty years.

American Physiotherapy Association Organized in 1920

Early in 1920 a group of Reconstruction Aides of the World War, realizing the need for professional contacts and the importance of organization in order to develop and progress in their profession, met at Walter Reed Hospital and organized the Women's Therapeutic Association. The following year the name was changed to the American Physiotherapy Association and the constitution revised to provide for chapters throughout the country. The present membership of this organization is approximately 1,000. There are 20 chapters located in 16 states, representing all sections of the United States. This group, organized as a scientific society, has felt a certain responsi-

bility and obligation to the members of its profession, and one of the purposes of this organization, as stated in the constitution, is "to aid in the establishment of educational standards and scientific research in physical therapy." The recognized educational and scientific standards of physical therapy technicians today have been accomplished through the efforts of the American Physiotherapy Association.

A Committee on Education[2] was formed which assumed the responsibility of the details of determining standards of education in physical therapy for those acceptable for membership. For several years this committee studied the problems of education and aided the schools in arranging their curriculum and establishing standards as efficiently as was possible within the physical limitations of a small organization. In 1928 this Association prepared and published requirements for entrance and a minimum curriculum as a standard for schools whose graduates would be eligible for membership in this organization.[3]

To establish and maintain high professional and scientific standards in physical therapy has not been an easy obligation to fulfill. When other groups greater in numbers and with considerable influence have threatened to defeat this purpose and the easier way would have been to lower ideals, the leaders of the American Physiotherapy Association appealed to those of the medical profession, who appreciated and valued the ideals of the organization and asked for counsel and guidance.

In 1930 the Council on Physical Therapy of the American Medical Association published suggested requirements for admission to schools and curriculum for the education of physical therapy technicians.[4] In 1933 a conference was held by representatives from groups interested in education in physical therapy; namely, the Council on Physical Therapy of the American Medical Association, the American Congress of Physical Therapy, and the American Physiotherapy Association. At this conference it was agreed that the establishing of standards in education could be more efficiently carried on through the Council on Medical Education and Hospitals of the American Medical Association. At the request of the American Physiotherapy Association a resolution was presented to the House of Delegates of the American Medical Association asking this organization to inspect and approve schools of physical therapy.

The survey of schools for physical therapy technicians was assigned to the Council on Medical Education and Hospitals in 1934. Thirty-five schools were inspected and studied. Following this the Essentials of an Accepted School for Physical Therapy Technicians were formulated and adopted by the Council and passed by the House of Delegates of the American Medical Association on May 9, 1936.[5]

The first list of schools, 13 in number, was published in the Journal of the American Medical Association, August 29, 1936.[6] At the present, 16 schools are approved by this Council. In a recent report this Council states:

> "The investigations of the various courses during the past few years have revealed in many cases a deplorable lack of requirements, organization, qualified faculty and particularly clinical material with which students can develop skill in the application of this knowledge. These conditions exist principally in so-called commercial schools. Approval is withheld by the Council for courses where arrangements are such that students are enrolled without the necessary preliminary background and proceed across a well paved short cut in their efforts to enter this highly technical field. Advertising commercial schools which adhere to no particular standards are turning out each year large numbers of inadequately prepared technicians."[5]

Preliminary Education

In the first standards of education published by the American Physiotherapy Association the preliminary educational requirements were: graduation from recognized schools of physical education, or graduation from recognized schools of nursing.[2] The requirements for admission to schools of physical therapy acceptable to the Council on Medical Education and Hospitals of the American Medical Association are: (1) Two years or sixty semester hours of college, including courses and physics and biology; (2) graduation from an accredited school of nursing; and (3) graduation from an accredited school of physical education.[5]

Not all of the education received in a physical education course or in a nurse's training course is essential as a preparation for a course in physical therapy. The ideal would be a well planned preliminary course to include many of the subjects taught in a course in physical education and in a nurse's training course together with courses in physics and biological sciences. However, at present no such preliminary education is available and the present requirements have proven quite satisfactory. Because of her knowledge of surgical asepsis, medical care, professional ethics, hospital administration, and her respect for hospital routine and understanding of its problems, the

physical therapy technician best qualified for position of head technician in a hospital physical therapy department is one who has had nurse's training as preliminary education.

Specific or Physical Therapy Education

Schools which are acceptable to the Council on Medical Education and Hospitals of the American Medical Association may be conducted by accredited universities, colleges, or hospitals. The faculty should have thorough education and successful teaching experience and should include not less than one qualified salaried instructor, and in each institution where practical training is given not less than one qualified physical therapist. Adequate equipment for teaching should be provided. The length of the course should be not less than nine months.[5] Physical therapy courses offered in universities with medical schools offer greater opportunities for adequate teaching facilities and the hospitals affiliated with the medical schools provide for ideal clinical practice in physical therapy.

Minimum Curriculum Requirements

The minimum curriculum required by the Council on Medical Education and Hospitals of the American Medical Association includes a total of 1,200 hours, 470 in theory and 730 in laboratory and practice training. The subjects to be included are: anatomy, physiology, pathology, electrotherapy, hydrotherapy, massage, therapeutic exercise, psychology, ethics and administration, principles of physical therapy as applied to medicine, neurology, orthopedics and surgery, and clinical practice. Suggested electives are: asepsis, bandaging, first aid, history of physical therapy, hygiene, joint measurements, office routine, occupational therapy, records and social service.[5]

The curriculum now approved requires 210 hours of anatomy, to consist of dissection of the human cadaver or at least the demonstration of this dissection. Seventy-five hours of physiology, thirty hours of pathology, and sixty-five hours of massage and therapeutic exercise are required. In the total of 1,200 hours 280 are devoted to the above subjects and 400 hours to supervised clinical practice. The clinical practice should be given in physical therapy departments which are under the direction of a physician and should be carefully supervised by a well trained physical therapist who is a capable instructor in technic.

Advance Education

Advance education of physical therapy technicians evolves itself into two types: (1) specialization; and (2) continued general education. In this progressive age physical therapy as well as other professions has developed branches of specialization. In departments of large hospitals where several physical therapists are employed the efficiency of the department may be increased by a division of certain types of work to those who are especially trained and skilled in these specialties. The fundamental general education in physical therapy as outlined above should be completed before special courses of training are studied.

Hospitals with a large children's department or out-patient clinic and a large orthopedic and neurological staff, and those hospitals which are providing hosptialization in the state programs for services to crippled children under the Social Security Act, will have a great number of cases of deformities, infantile paralysis and other neurological problems among them the group commonly known as "spastics." The treatment of these conditions by physical therapy requires a personality adapted to the successful dealing with children and special training and experience in muscle re-education, underwater exercise, fitting of braces and splints, and education in walking which can not be obtained in the length of time allotted to a general course in physical therapy. Specialization in these branches requires a period of at least six months' training in well organized centers specializing in this type of treatment.

General Type of Cases

The greatest number of cases referred to the physical therapy department of a general hospital are joint and muscle injuries, fractures, peripheral nerve injuries, spinal cord injuries, chronic arthritis, bursitis, myositis and infantile paralysis. The principal physical therapy measures used in the treatment of these diseases are some form of heat, massage and exercise. The physical therapist should be well trained in these branches of physical therapy. To intelligently and efficiently apply massage and exercise requires a good fundamental knowledge of anatomy, physiology and pathology with a thorough understanding of the principles and technic of massage and exercise. The correct technic can be acquired only by a long period of careful practice. The organizations which have been influential in setting standards of education for physical therapy technicians have appreciated the value of this part of the training and have required thorough courses in these subjects.

Study of Invalid Psychology Necessary

The physical therapist should appreciate the importance of treating the patient as an individual and not only for this physical disability.

The ability to complete this program of rehabilitation requires an understanding of personality makeup in order to successfully deal with ill individuals and an acquaintance with agencies which may aid in restoring the patient to a useful life. Therefore, training should include short courses in psychology of the invalid, an insight into the work carried on through social service and some knowledge of the use of occupational therapy and vocational training.

Records of Progress and Results

The value of physical therapy can be determined only by a study of the results obtained by the use of the branch of treatment. The physical therapist should be taught methods of measuring range of movement in joints and of keeping accurate and informative records of the patient's response to physical therapy treatment as well as definite information on the type of physical therapy which has been employed. Careful records will give opportunity for research study in problems of physical therapy technic and in the value of this science in the treatment of disease.

The efficiency of a physical therapy department and its financial value to a hospital will depend upon the executive ability of the head physical therapist and her administration of the work in the department and in the relation of this department to the regular routine of the hospital. Efficient and adequate treatment to obtain satisfactory results must be given to the patients and the work must be planned to accomplish this in a manner satisfactory to the patient and with the least expense to the hospital. Administrative methods and ethics should be included in physical therapy education.

Fractures

The use of physical therapy in the early treatment of fractures has lessened the period of disability resulting from these injuries. The administration of massage and exercise to a recent fracture requires a thorough knowledge of physical therapy and special skill and training under the direction of a surgeon specializing in bone and joint surgery. Any hospital caring for a large number of industrial and other accident cases should have one member of its physical therapy staff who is especially trained and skilled in the care of fractures and who may be permitted to work under the direction of and in close cooperation with the members of the surgical staff specializing in bone and joint surgery.

Nervous and Mental Cases

The hospital caring for a great number of nervous and mental cases will require a physical therapist especially trained, in addition to general physical therapy, in the care of this type of case. The physical therapy department should have a well equipped section of hydrotherapy and should employ a physical therapy technician who has had an approved course in physical therapy and in addition is adequately trained and experienced in the use of hydrotherapy.

Fever Therapy

The use of fever therapy has been much abused by the employment of personnel inadequately trained in fever therapy. This is a highly specialized branch of physical therapy treatment and should definitely be a part of the physical therapy department of the hospital. Because of the constant attention to the patient which is required in this treatment it is impossible for a physical therapist to be responsible for any other part of the work while giving a fever treatment.

Careful nursing care is required for the patient during a fever treatment; for this reason, a physical therapist who has had nurse's training as a background is best prepared for this type of physical therapy. The administration of this treatment never should be left in the hands of a nurse who has observed only a few treatments of this sort but should be given by a nurse who has been adequately trained in physical therapy and has had a thorough course and long experience in fever therapy under the supervision of a physician with sufficient experience to supervise these treatments. The treatment must always be under the direct supervision of a physician who is available at any moment of emergency but the physical therapist must be adequately trained to be able to recognize an approaching emergency.

Continued General Education

Education in any profession does not cease with graduation from a prescribed course. This is true in the education of physical therapy technicians. Physical therapy, as compared to the other branches of healing, medicine and surgery, is in its infancy. Progress in this science will be made only by continued study of scientific methods.

The physical therapy technician must have the ambition to continue her study in every patient which she treats. The hospital shares the responsibility in this part of education by making it possible for its physical therapy staff to carry on their scientific study. This may be accomplished by making available current literature pertaining to physical therapy, by conferences on

physical therapy problems, by attending scientific meetings and by research.

The Constitution of the American Physiotherapy Association includes in the purposes of this organization, the promotion of the science of physical therapy and to provide available information for those interested in physical therapy. The early leaders of this organization appreciated the value of continued education and in March, 1921, the first issue of *The Physiotherapy Review*, the official publication of this organization, was published.

The growth of this magazine to the place which it holds in medical literature today is a great tribute to the time and efforts of the editorial Board and business management in the past and at the present.

Organized as a scientific society to establish and maintain professional and scientific standards for those engaged in physical therapy, the American Physiotherapy Association affords an opportunity for professional contacts and the benefits of scientific meetings as a means of further education. Every eligible physical therapist should take advantage of membership in this association and take part in its activities. The hospital should encourage this opportunity for educational benefit by assisting the physical therapy staff to take part in the program and scientific exhibits of its meetings. The various chapters of this Association throughout the United States hold monthly or bimonthly meetings at which excellent scientific papers are presented. Many of these chapters offer continued education by sponsoring series of lectures on subjects of special interest to physical therapists; lectures given by some member of the medical profession specializing in these branches.

Developing the Physical Therapy Department in the Hospital

Continued study of the needs of any physical therapy department must be carried on by the personnel of that department and by the hospital authorities. If the staff of the physical therapy department consists of more than one technician, frequent conferences of the staff should be held to discuss methods of technic in the treatment of patients and problems of administration of the department. Occasionally the hospital authorities directly responsible for the physical therapy department should attend these conferences to discuss methods of increasing the efficiency of the department. The head physical therapist should be permitted to attend hospital medical staff meetings and occasionally demonstrate the technic of physical therapy in the treatment of cases presented at these staff meetings.

Scientific research on technic of physical therapy is greatly needed. Hospitals may be of great assistance in this method of physical therapy education. Physical therapists should be encouraged to carry on research studies in methods of technic and to present their results at staff and other scientific meetings or for publication in professional magazines. They should also be permitted to serve as technical assistants to any member of the staff who may be interested in research problems relating to physical therapy.

Hospitals will add to the efficiency of their department and aid in maintaining high standards of education for physical therapy technicians by selecting the personnel of their physical therapy department from graduates of approved schools.

The American Registry of Physical Therapy Technicians was organized in 1934 for the purpose of (1) cooperating with the Council on Medical Education and Hospitals of the American Medical Association in their investigation, classification and inspection of schools which conduct courses for physical therapy technicians; (2) maintaining standards of education; (3) conducting a placement bureau for registered physical therapy technicians; and (4) promoting the use of these technicians in hospitals and physicians' offices. Applicants for registration must be graduates from a course in physical therapy approved by the Council on Medical Education and Hospitals of the American Medical Association and must pass a written and practical examination.[7]

The American Physiotherapy Association maintains a vocational service for its members who are desirous of positions. When employing physical therapy technicians hospitals should avail themselves of the opportunities offered by these organizations to obtain technicians who have had adequate professional education. By the cooperation of all those interested in efficient and scientific physical therapy high standards of education will be developed and maintained.

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Hospital Service Plan News

Prepared by the Commission on Hospital Service and the Council on Hospital Service Plans

THE American Hospital Association announces the 1940 approval of 60 plans which have complied with the standards for nonprofit hospital service associations established by the Commission on Hospital Service of the American Hospital Association. These four plans have been approved for the first time:

Hospital Service, Inc., of Iowa. Incorporated August, 1939. Insurance Exchange Building, Des Moines

Piedmont Hospital Service Association. Incorporated June, 1938. Lynchburg, Virginia

Virginia Peninsula Hospital Service Association. Incorporated May, 1938. Law Building, Newport News, Virginia

Associated Hospital Service, Inc. Incorporated October, 1939. Loyalty Building, Milwaukee, Wisconsin

The 56 plans which were listed in last month's *HOSPITALS* have all been reapproved for the year 1940.

The executives of hospital service plans have requested that institutional members of the American Hospital Association retain the list of approved plans in their files to use in accepting emergency hospital patients who are subscribers of distant hospital service plans.

March 4, 1940, has been designated as "Approval Day" by the Commission on Hospital Service and announcement will be made to the press on that day.

Mid-Winter Conference of Hospital Service Plans

On January 24, 25, and 26, the following directors, representatives and delegates of hospital service plans met at the William Penn Hotel in Pittsburgh. The headquarters city of the plan with which they are associated is given after each name.

C. J. Anderson, Atlanta, Georgia
W. N. Armstrong, Rockford, Illinois
Victor M. Anderson, St. Paul, Minnesota
Edward C. Ames, Toledo, Ohio
Wesley Arden, Philadelphia
Paul F. Bourscheidt, Peoria, Illinois
F. Harper Blaisdell, Boston
Lucile Bennett, St. Paul, Minnesota
John H. Beard, St. Paul, Minnesota
Frank X. Beck, Rochester, New York
A. S. Brower, Durham, North Carolina
Claire A. Bachmann, Pittsburgh, Pennsylvania
George T. Bell, Jr., Wilkes-Barre, Pennsylvania
James A. Berne, Cleveland, Ohio
H. B. Coolidge, Savannah, Georgia
R. M. Cunningham, Jr., Chicago
J. D. Colman, Baltimore, Maryland
R. F. Cahalane, Boston
K. G. Campbell, Boston
Julian M. Corey, Boston
E. J. Cunningham, Boston
Arthur M. Calvin, St. Paul, Minnesota
Dr. George R. Critchlow, Buffalo, New York
E. B. Crawford, Chapel Hill, North Carolina
Frank J. Chesterman, Pittsburgh, Pennsylvania
Edgar H. Clapp, Providence, Rhode Island
M. Haskins Coleman, Jr., Richmond, Virginia
Louis Degenhardt, Alton, Illinois
F. A. Deniston, Chicago
H. S. Drenk, Chicago
Gertrude Dacken, Boston
Paul G. Drescher, New York City
E. R. Evans, Albany, New York
G. W. Even, Buffalo, New York
Geo. P. Farrell, Buffalo, New York
Sample B. Forbus, Durham, North Carolina
L. D. Fowler, Cincinnati, Ohio
Thomas R. Finnie, Youngstown, Ohio
Helen Rhodes Filbert, Pittsburgh, Pennsylvania
O. Leon Gonzalez, Harrisburg, Pennsylvania
Franklin S. Garman, Philadelphia
E. J. Henryson, Washington, District of Columbia
Roger W. Hardy, Boston
F. K. Helsby, Kansas City, Missouri
Ralph Hammersley, Jr., Albany, New York
Amos Hiatt, New York City
E. M. Herndon, Durham, North Carolina
Maynard J. Hammond, Cincinnati, Ohio
Clement W. Hunt, Harrisburg, Pennsylvania
John Hart, Charleston, West Virginia
Lewis E. Jarrett, M.D., Richmond, Virginia
Ralph W. Jordan, Columbus, Ohio
Robert E. Johnson, Jamestown, New York
Edward H. Johnson, Jamestown, New York
Peter E. Klein, St. Paul, Minnesota
Mrs. John T. Kenny, St. Paul, Minnesota
Dr. Paul Keller, New York City

Michael A. Kelly, Cleveland, Ohio
L. O. Key, Roanoke, Virginia
Virginia Liebeler, St. Paul, Minnesota
Dr. George H. Lockwood, Kansas City, Missouri
Martha C. Lockman, Pittsburgh, Pennsylvania
Wm. A. Lowe, Norfolk, Virginia
Robert J. Marsh, Huntington, West Virginia
J. E. MacCloskey, Pittsburgh, Pennsylvania
Harold Maslow, Pittsburgh, Pennsylvania
Marianna McNees, Harrisburg, Pennsylvania
Robert E. Mills, Youngstown, Ohio
Dr. Basil C. MacLean, Rochester, New York
John A. McNamara, Cleveland, Ohio
Carl M. Metzger, Buffalo, New York
Ray F. McCarthy, St. Louis, Missouri
W. R. McBee, St. Louis, Missouri
Ed. S. Moore, Birmingham, Alabama
Wm. S. McNary, Denver, Colorado
Msgr. John R. Mulroy, Denver, Colorado
H. V. Maybee, Wilmington, Delaware
J. H. Mathewson, Ashland, Kentucky
J. Philo Nelson, San Francisco
John D. O'Brien, St. Louis, Missouri
J. Wallace Ould, Lynchburg, Virginia
George Putnam, Boston
Richard O. Parker, Canton, Ohio
Fred T. Peters, Cleveland, Ohio
Ned F. Parish, Cleveland, Ohio
H. Proctor Redd, Boston
Katherine Regan, Philadelphia
W. A. Schroeder, New Orleans, Louisiana
Russell S. Spaulding, Boston
Earl R. Sweet, Kansas City, Missouri
Harry Sesan, New York City
E. G. Smith, Cleveland, Ohio
Ruth V. Sourwine, Toledo, Ohio
Margaret K. Schick, Pittsburgh, Pennsylvania
Stanley H. Saunders, Providence, Rhode Island
C. Raine Sydnor, Lynchburg, Virginia
Geo. M. Taylor, Cincinnati, Ohio
Lane Tynes, Louisville, Kentucky
Bryce L. Twitty, Dallas, Texas
Frank Van Dyk, New York City
E. A. van Steenwyk, Philadelphia
Leroy Vincent, Philadelphia
L. R. Wheeler, Milwaukee, Wisconsin
R. A. Wyland, Parkersburg, West Virginia
Elizabeth Wagner, Pittsburgh, Pennsylvania
Harry E. Wann, Pittsburgh, Pennsylvania
John B. Wiggins, Durham, North Carolina
Thomas B. Wood, Akron, Ohio
E. A. Williams, Cleveland, Ohio
Mrs. Edward J. Walsh, St. Louis, Missouri
Paul A. Webb, Portland, Maine
Edward Young, Portsmouth, Ohio

Three hundred persons attended the dinner on Thursday evening, January 25, at which Dr. Fred Carter, president of the American Hospital Association, and Monsignor John Mulroy, president of the Colorado Hospital Service Association, were the speakers. Abraham Oseroff served as toastmaster.

One session was devoted to statistical findings of certain of the plans; another to a symposium of low cost hospital plans; four different sessions concerning enrollment, public education, accounting and hospital admissions were carried on simultaneously on the second afternoon of the conference.

All the papers presented at the Conference have been included in the printed *Proceedings of the Mid-Winter Conference of Hospital Service Plans*, 1940, and copies of this are now available at $1.00 each.

The Research Program and Information Service was recommended to continue for another year at the same rate of assessment, with the addition of public education to the present activities of the Program. The hospital service plans making financial contributions for the year 1940 delegated the administration of their joint activities and resources to an "Administrative Board" composed of the personnel of the Commission on Hospital Service and the Council on Hospital Service Plans, with the chairman and director of the Commission serving as chairman and director, respectively, of the Administrative Board.

The next Mid-Winter Conference of Hospital Service Plans will be held in New Orleans in January or February, 1941.

New Participating Hospitals

The Nanticoke General Hospital of Nanticoke, Pennsylvania has become a participating member of the Hospital Service Association of Northeastern Pennsylvania. This is a state-controlled general hospital.

The Bath Memorial Hospital, Bath, Maine, voted to participate in the Associated Hospital Service of Maine.

The Somerset Community Hospital of Somerset, Pennsylvania, announces its membership in the Hospital Service Association of Pittsburgh.

The Petersburg Hospital at Petersburg, Virginia, has become a member of the Richmond Hospital Service Corporation.

The Robert Packer Hospital of Sayre, Pennsylvania, has applied and been accepted as a member hospital of the Group Hospital Service, Inc., of Syracuse, New York.

The Baltimore Eye, Ear, Nose & Throat Hospital and the Presbyterian Eye, Ear, Nose and Throat Hospital, have become members of the Associated Hospital Service of Baltimore. These are the first two special hospitals to become member institutions in the plan.

The Kenosha and St. Catherine Hospitals of Kenosha, Wisconsin, have been received into mem-

bership in the Associated Hospital Service of Milwaukee. St. Francis and St. Mary's Hospitals of Superior, Wisconsin, and the West Side and Mercy Hospitals of Milwaukee have also joined this organization within the past month.

Expanding Services

The following changes have been made in the rules and regulations of the Rochester Hospital Service Corporation:

1 *Monthly Groups* — Hereafter applications will be accepted not more frequently than every three months (dating from the anniversary date of the original group).
2 *All Groups*—New applications and changes in contracts must be in the office of the corporation fifteen days prior to the effective date.
3 *Maternity*—Effective January 1, 1941, maternity coverage will not be given to a married woman whose spouse is not insured under the same or another contract, nor unless both have been insured under the same or separate contracts for at least 10 months prior to the admission to a hospital.
4 *Adding Family Members*—A special ruling has been approved by the Board which will make it possible for subscribers to add any eligible family members (who are not insured at the present time) to contracts between now and March 1, 1940. *This temporary ruling makes it possible for a married woman, whose husband is not insured, to include the spouse on the contract in order that she might be eligible for maternity coverage after January* 1, 1941.
5 *A new-born child* in good health may be added to the parent's contract after the child is ninety days old. Upon receipt of application, the corporation will notify the subscriber in writing of the date on which coverage becomes effective.

* * *

The Michigan Society for Group Hospitalization on the first of January increased benefits to subscribers by adding hospital care for contagious diseases such as scarlet fever, diphtheria and tuberculosis, and for mental, alcoholic and drug cases. Half of the hospital bill will be paid by the Michigan Society for Group Hospitalization for an additional 90 days after 21 days.

* * *

The Minnesota Hospital Service Association has extended its territory to cover Bemidji, Minnesota —Paul Bunyan's territory—and a drive for members is now being conducted under the leadership of Mrs. Virginia Liebeler, state director of rural enrollment.

Effective March 1, 1940, the following increase of benefits is to be provided to the employed subscribers of the Minnesota Hospital Service Association: if a subscriber does not use hospitalization during any one year, he will be entitled to twice the number of days of care during the ensuing year. Subscribers are now entitled to 21 days of care in their first year of membership, 24 the second, 27 the third and 30 the fourth and all succeeding years, while dependents receive 21 days of care.

* * *

At its second annual meeting in January, the board of directors of Capital Hospital Service, Harrisburg, Pennsylvania, voted to remove the age limit of 65 years for new members and voted to pay a portion of subscriber's hospital bill for a period of 60 days after the 21 fully paid days. The board also requested the executive director to draw up a low-cost ward-service plan for consideration at their next meeting.

News of Annual Meetings

At its annual meeting the Group Hospital Service, Inc., of Syracuse, New York, elected Robert L. Eckelberger, administrator of the Wilson Memorial Hospital of Endicott, New York, to the board of directors.

* * *

The *Fulton County Medical Society Bulletin,* Atlanta, Georgia, Vol. 14, No. 1, January 4, 1940, reports on the annual meeting of the United Hospitals Service Association: "Wiley L. Moore, widely known business and civic leader, was elected president of the organization, succeeding Dr. L. C. Fischer, who retired after having served as president of the Association since its beginning in November, 1937. Dr. Fischer was elected president-emeritus for life and was presented with a silver loving cup by the directors as a token of appreciation of his valuable service to the organization. Since its organization the United Hospitals Service Association has paid hospital bills amounting to $139,040 for 2,592 members. The directors adopted resolutions of appreciation of Mr. Anderson and his outstanding work in connection with the rapid development of the association."

* * *

Plan for Hospital Care of Chicago announced the payment of $868,195 in hospital bills since the beginning of operations in 1937. The average benefit has been $39.59 and the average length of stay 6.64 days.

* * *

The Minnesota Hospital Service Association at

its annual meeting on January 17 elected Victor M. Anderson, manager of Abbott Hospital, Minneapolis, president for the coming year; James McNee, superintendent of St. Luke's Hospital, Duluth, vice president; Dr. Peter Ward, superintendent of Miller Hospital, St. Paul, secretary, and A. A. McRae, Minneapolis, treasurer.

Miscellaneous News

Group Hospital Service of St. Louis announced the arrival of its one thousandth baby on February 6, 1940.

* * *

The Hospital Service Corporation of Western New York signed up its one hundred thousandth subscriber on January 10.

* * *

J. Douglas Colman, director of the Associated Hospital Service of Baltimore, was a speaker at the Johns Hopkins University in a series of lectures on medical care presented during January and February under the DeLamar Foundation. Following his lecture, Mr. Colman led a further discussion of the subject before Dr. E. L. Crosby's class in Medical Statistics at Johns Hopkins.

* * *

The Wisconsin Hospital Association has voted to work out some plan whereby the Associated Hospital Service, Inc., of Milwaukee, can act as the agency of Wisconsin hospitals in making available to the counties of the state adequate hospitalization in private institutions for indigent patients. For example, counties cooperating in such a plan could pay a per capita daily amount to the Associated Hospital Service for each day of hospital care needed by some indigent, and the Associated Hospital Service would arrange for space in private hospitals for such patients. George Meyers of the Medford Clinic, Wisconsin, was named chairman of a special committee of three to study and report on the problems of caring for the indigent sick.

* * *

A complimentary copy of "Non-Profit Hospital Service Plans," the brochure recently issued by the Commission on Hospital Service, has been sent to all members of the American Hospital Association, the officers and members of the House of Delegates of the American Medical Association, the libraries of outstanding colleges, and to a large number of medical and hospital magazines.

* * *

The Scott Paper Company cooperated with the Associated Hospital Service of Philadelphia by putting notices on the clock cards of all employees two days before the closing of group enrollment. About 42 per cent enrolled with the first group, even though employees already belong to a beneficial association which pays $4.00 per day in case of illness.

* * *

Western New York Medical Plan has received its operating permit from the New York State Insurance Department and has opened offices adjoining the Hospital Service Corporation of Western New York, the field staff of which will handle enrollment of subscribers throughout the area. The acting board of trustees, includes the following 16 physicians and 9 laymen who were the original incorporators of the plan: Dr. J. Louis Preston, Salamanca, New York; Dr. L. L. Klostermyer, Warsaw, New York; Dr. Egbert Burhyte, Niagara Falls, New York; Drs. James H. Borrell, Harold F. R. Brown, Carlton Wertz, Walter L. Machemer, Alfred Noehren, Julius Y. Cohen, Harry C. Guess, John T. Donovan, Louise W. Beamis, George P. Critchlow (chairman), Harvey P. Hoffman, and Herbert H. Bauckus, all of Buffalo; Dr. Amos J. Minkel, Hamburg, New York; Merrill E. Skinner, industrialist, Eugene Warner, attorney, Allan B. Williams, banker, Walter J. Brunmark, retailer, Morey C. Bartholomew, attorney, L. Ellsworth Buck, banker, Joseph Wechter, lawyer, and Victor B. Wylegala, lawyer, all of Buffalo; Waldo C. Hovey, chemist, Niagara Falls, New York; Allan B. Williams, banker, Olean, New York.

A permanent board of directors will be elected by participating physicians in the near future.

Ford Motor Company Enrolls

The first instance of medical and hospital cooperation in joint enrollment of a large group comes with the coverage of the Ford Motor Company employees by the Michigan Medical Service (the medical society's plan) and the Michigan Society for Group Hospitalization (the hospital association's plan) starting March 1, 1940. In return for payment of $1.00 per month, employees (only) of the company will receive the usual hospital benefits received by other subscribers to the ward plan of the Michigan Society, and in addition will receive surgical services, diagnostic x-rays, and maternity care after 12 months' membership. There are 84,000 employees in the state of Michigan. Payments to the plan will be made through payroll deduction.

Jack D. Laux, formerly with the Bureau of Medical Economics of the American Medical Association, is executive director of the Michigan Medical Service, and John R. Mannix, formerly superintendent of the University Hospitals of Cleveland, is executive director of the Michigan Society for Group Hospitalization.

Unification of Administration and Control of Food Service Under the Dietary Department

RUTH M. PARK

IN THE hospital of today where every kind of service is rendered to all classes of individuals, the science of nutrition has become an important factor. The type of food service that was adequate yesterday will not meet the needs of today, this is very largely the result of the rapid development of the hospital into a highly organized scientific institution. As an executive officer, the dietitian must be directly responsible to the superintendent. She must have sufficient authority for the proper administration and control of the entire general and scientific food services, and the nutrition education of patients, nurses, students and personnel, thus linking her with the four major departments of the hospital; namely, financial, medical, nursing and educational.

The Author

● **Ruth M. Park is Director of Dietetics, Montreal General Hospital, Montreal, Canada.**

Budget Plan and Administrative Efficiency

Since efficient business methods are now applied to hospital administration, the well-organized institution is interested in the budget plan of financing. To be of practical value it is essential that the business manager provide the dietitian with a monthly expense record in order that food control and expenditure may be adjusted. The estimation of an accurate budget is easily obtained by studying previous expenditures over a specific period. Salaries, equipment, and food should be budgeted separately. Because of the direct bearing on the budget careful and scientific planning should be given all physical facilities and arrangements to provide maximum service with minimum labor. Equipment should be selected with a view to standardization of work, minimum of repair, ease with which it may be cleaned, adequacy to meet the actual need, and what is most essential, the possibility of reducing operating costs. Since it is estimated that the cost of food service is about one-third of the total expenditure of an average hospital, it is of utmost importance that accurate departmental costs be kept. It is equally important that the dietary department control every phase of food service from the purchasing of supplies to the serving of food to patients and staff.

To hold the dietitian responsible for the successful administration of her department without administrative authority is not businesslike.

Purchase, Preparation, and Distribution of Food

Purchasing—The basis of food standardization is the wise selection and purchasing of supplies which presupposes an understanding of market conditions, food production and distribution so that every economy compatible with a high standard of service is effected. There are two prime requisites to purchasing: (1) definite specifications for all materials taking into consideration quality, net yield and comparative costs; (2) inspection of purchases to see that these specifications are met.

Preparation—The menu is the pivot for satisfaction and expenditure, hence good nutrition in the form of properly balanced meals that are esthetically pleasing to the eye as well as to the palate, is of utmost importance to patients and staff. Commercial food service has long emphasized the value of eye appeal, but in many hospitals this fact is totally disregarded. Much may be said for the selective menu since it gives greater satisfaction to the patient and tends to lower cost levels without increasing labor in production. This is also true in staff and personnel dining-rooms where satisfaction and control of expenditure are important factors.

Distribution—Selling the hospital to the public rests, to a great extent, on the dietary department. Therefore, opportunity must be given the dietitian for direct and continuous contact with the patient. In this way many preconceived food prejudices indulged in by patients are eliminated

and better food habits formed. This is equally essential with regard to those patients requiring therapeutic diets, where diet instruction is not only required but is frequently necessary to make adjustments in order that the food dollar may be more wisely apportioned.

Personnel Management

Developing workers in the dietary department is a task which must be faced in every institution. If the superintendent holds the dietitian responsible for the per capita cost of food it presupposes she must be in complete charge of all employees having to do with its preparation and distribution. The labor problem is often acute in hospitals, because of a low wage scale and long hours of work without definite plan for promotion or provision for leisure time. These factors are regarded by the applicant as important points to be considered, and determine to a great extent the worker who would be interested in this type work and his attitude toward the job.

Definite health standards should be required and a record of each employee filed, giving information concerning wages, type of work, health record and time off through illness. Routine examination more than repays the hospital, since by this means employees who might be physically unfit for the work are eliminated, and minor disabilities in an otherwise satisfactory employee are easily detected and adjusted.

Mistakes are just as costly in the hospital as in the commercial field and frequently occur because the employee does not understand what is expected of him either in relation to his particular job or to other workers in the institution. Hence there should be a definite training program coupled with a job analysis, and each new worker should be given a schedule and taught the technique necessary for the efficient execution of the service he will be expected to perform. Working conditions have a marked effect on the employee and competition, increase in wages and praise for work well done will stimulate him to greater effort. The outstanding advantages of this system are: (1) improved standards of cleanliness; (2) organization of work in such a way that production is increased with less fatigue; (3) improved service due to the response of the worker to the confidence placed in him; (4) decrease in many avoidable accidents; (5) elimination of unnecessary waste and consequent cost to the department; and (6) increase in loyalty and cooperation to the institution, thus stabilizing employment by harmonious relationship.

Education

The nutrition education of the student nurse, dietitian, and medical student as well as that of the patient, is also one of the major functions of the department. Today, as never before, we recognize the need for community education in nutrition and its relation to preventive medicine in helping to create strong, healthy people. It is the general practice in the majority of hospitals for student nurses and dietitians to have training in the preparation and delivery of food to the patient. They must also be taught to realize that the viewpoint of the sick individual is quite different from that of the well individual and this must be kept in mind in any service to the patient. There are many avenues of research open to the dietitian other than in the field of nutrition. Personnel management, food costs, equipment and supplies each present worth while problems, and time should be permitted for the development of these important angles of the work.

Advantages of Centralized Control

Through centralized control better operation with smoother functioning is provided, and correlation of all services is effected more readily than when control is divided. It permits all divisions within the department to be supervised by a trained specialist; it eliminates duplication of work; it produces a more satisfied, efficient employee who is responsible to one authority; it provides more efficient control of departmental costs by permitting a direct check on supplies; it is more satisfactory from the standpoint of the patient, since praise or blame is borne directly by the department for the entire food production and service; it permits the use of the resources of the department to their fullest extent.

Dietary management is largely dependent upon good leadership. To organize an efficient department the incumbent must possess sound fundamental knowledge based on a background of broad cultural and scientific training with ability to carry that knowledge to a high level of efficiency, and at the same time to appreciate the importance of scientific technique. She must also possess a keen insight into human nature, an open observant mind, self-control and reasonable self-confidence, a balanced sense of justice, tolerance born of gracious kindliness and courtesy, and finally the priceless gift of vision without which leadership is impossible.

American Hospital Association Convention, Boston, Sept. 16-20

The Administration of Roentgenologic Files

CHARLES G. SUTHERLAND, M.D.

RECORDS concerning roentgenologic examinations are an integral part of the responsibilities of every hospital or other organized medical institution. The development of roentgenology has brought it into intimate relationship with almost every branch of medicine and surgery. Much of the technic of the newer methods of diagnosis depends largely on roentgenologic factors. As a result, the physician, the surgeon, and those working in the various specialties are concerned with roentgenologic records for statistical information, for illustration of scientific literature, for lantern slides to be used in lectures and demonstrations, and for original films for teaching purposes.

The progress and results of many pathologic processes can be visualized in series of roentgenograms made at successive periods. Files must be maintained in such a manner that the roentgenograms and the reports of the opinion in each examination can be made quickly and conveniently available when they are wanted for comprehensive studies.

The keeping of roentgenologic records presents two problems: the recording of the data and the filing of the roentgenograms. Both are interdependent and both present problems in administration. The degree of success of any system depends on simplicity of routine procedures and close cooperation with the statistical section of the hospital or institution concerned.

Significance of the Registration Number

In the Mayo Clinic each patient, on registration, is given a serial number. This serial number is used on all the records of the patient throughout the clinic and associated hospital services. Should the patient re-register at some subsequent date, the same serial number will be used on all records. As a result of this arrangement, all the data concerning a given patient gravitate into a single file. On dismissal of the patient, this file is sent to and is retained by the Division of Biometry and Medical Statistics. All the significant data concerning the individual patient are coded and recorded, using the Hollerith system of punched cards, and are in this manner made quickly and conveniently available for any given study. This obviates the necessity for any elaborate system of indexing in any other sections of the clinic or in any of the hospitals.

The Author

● **Dr. Charles G. Sutherland is a member of the Staff of the Section on Roentgenology, Mayo Clinic, Rochester, Minnesota.**

In the presentation of methods of recording roentgenologic opinion, it is only just to acknowledge the advantage that such an arrangement affords an investigator over others who must approach their problems under less favorable circumstances.

Recording of Data Prior to 1925

At the Mayo Clinic prior to 1925, when a patient was sent for roentgenologic examination, the referring physician wrote the request on a general referring card. This card was 5 inches by 3 inches in dimension and was printed on 110 pound index bristol stock. Written on this card was the registration number, the name of the patient, the date, the name of the referring physician, the part or parts of the body to be examined, and the reason for requesting the examination. A four-line space was reserved below, into which the report was written later.

On presentation of a referring card, the clerk at the reception desk of the Section on Roentgenology copied all the data from the referring card on a new form. There were separate forms for examinations of the thorax, bones, urinary tract, digestive tract or gallbladder. These forms could not be filled out at the rate of more than fifty an hour. Those intended for recording results of examination of the thorax, bones and gallbladder were 9⅜ inches by 6⅝ inches in dimension; those for recording results of examination of the urinary tract and digestive tract were 9⅜ inches by 13¼ inches in dimension. The latter were folded over

to the single sheet dimension before being filed. All were printed on 50 per cent rag content ledger paper of a weight of 24 pounds per ream.

The newly made form was sent with the patient and the film-marker, which was also made up at the desk, to either the technician who was to make the roentgenograms or the consultant who was to make the roentgenoscopic observation, as the case might be. A separate roentgenoscopic sheet was also made out at the desk to go with patients who had roentgenologic examinations of the digestive tract; since this particular form was continued in use under the new system which was later installed, it will not be included in the present discussion.

The referring cards were retained at the reception desk until they were needed for transcription of the reports. The newly made forms were retained by the technicians until the roentgenograms had been processed and were ready for reporting. The forms were then assembled by the consultant, who thumbed through the collection until the corresponding form was found, viewed the roentgenograms and wrote the opinion in the space allotted to it on the form. The referring cards were collected from the reception desk and were sorted with the newly made forms until each card was with its corresponding form. The report of the opinion was then transcribed to the referring card.

The form was retained as the department record sheet; the referring card was sent back to the referring physician.

The data were copied from the referring card or from the department record sheet, whichever happened to be available, on the envelopes in which the roentgenograms were to be filed. Each copying represented a delay of one hour for every fifty examinations; the delivery of the reports to the referring physicians was delayed at least to this extent.

After they had been used to carry out the routine duties, the department record sheets were filed, those containing positive results of examinations and those containing negative results in one numerical sequence. They were filed in drawers, five drawers to each cabinet, and each cabinet measured 14 by 28 by 52 inches. In the year 1922 these cabinets occupied 82 square feet of floor space and their numbers were increasing annually at a rate that would have required at least 15 additional square feet of floor space each year.

These large forms were devised and printed in a manner that allowed the underscoring of words and symbols to afford a rapid and comprehensive review of the opinion in each examination in sub-

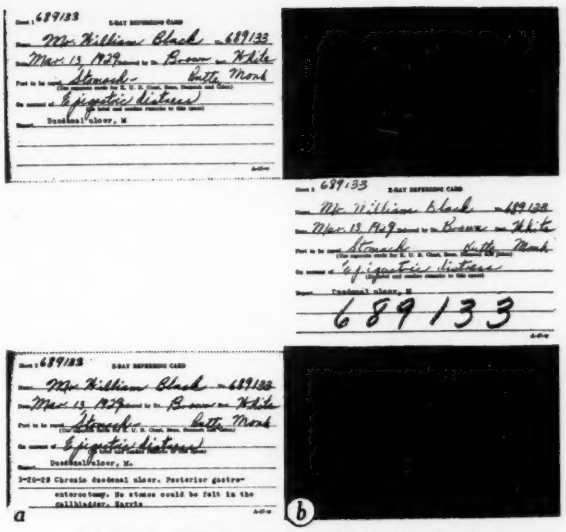


Figure 1—Roentgen Ray Referring Card

sequent studies. But for some reason, use of these forms was not found practicable; no underscoring was done at any time on the majority of them and only for a limited time on the remainder. Nearly all of them were found to contain the report of the opinion written on a single line.

The opinions of the examination were not otherwise recorded; to learn whether a given patient had been examined, it was necessary to consult the department record sheet in the filing cabinet.

The opinions given concerning examination of the digestive tract were typewritten on large loose leaves (18 by 15¼ inches dimension) in chronologic sequence. The complete data from the department record sheet were copied on these large leaves. These sheets were assembled in order in binders. When a patient was operated on, the surgical data were typewritten on the opposite page in line with the data of the roentgenologic examination. A double page (36 by 15¼ inches) held twenty-five entries. The capacity of each binder was approximately 1,500 entries. From six to ten binders were required to hold the data accumulating during a single year. An alphabetic index was maintained in the front of each volume. A typewriter with an especially wide carriage was required to write the entries and one secretary spent the greater part of the day maintaining this record. The accumulation of these massive volumes by the time it was decided to change the entire system occupied at least 18 square feet of floor space and had a potentiality of extensive additional demands.

The equipment concerned with the keeping of roentgenologic records was occupying 100 square feet of floor space and it was not possible to meet a further demand for expansion of this space

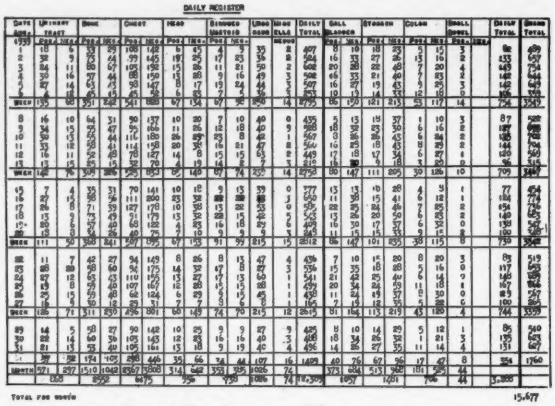


Figure 2—Daily Register of Roentgenologic Findings

without a considerable expenditure of capital for rearrangement of the departments of the Section of Roentgenology. It was decided to eliminate some of the filing cabinets and to abandon the use of the statistical ledgers to record and correlate the data of the examinations of the digestive tract.

The department record sheets containing negative opinions were withdrawn from the files and were discarded. All the important data from the department record sheets containing positive opinions were typewritten on loose leaves, the registration numbers running in numerical sequence. Both sides of the paper were used. These loose leaves were then assembled in order and placed in binders. The resulting books were given suitable legends and placed consecutively on shelves situated conveniently for ready reference. As the filing cabinets were emptied, they were sent to the Division of Biometry and Medical Statistics for use as they were required. The value of the equipment surrendered by this arrangement exceeded the cost of the compilation of this data and the assembling of it in such compact form.

Changes in the System in 1925

After careful study and experiment with improvised forms, a new system was installed in 1925. To replace the general referring card, an "x-ray referring card" (*fig.* 1*a* and *b*) was devised. A sheet of news print (35 pound weight) 9 by 5 inches in dimension had three equal portions printed in such a manner that it could later be folded to produce a triplicate copy of the same information. The portions were numbered 1, 2 and 3 on the printed side. On the reverse of the paper, each end of the sheet was carboned over a depth of three inches. When this sheet was subsequently folded it had the same dimensions as the general referring card and fitted the envelopes and office equipment used throughout the clinic to hold these referring cards.

When referring physician, using this new form, wrote a request for roentgenologic examination with a moderately hard pencil or a stiff-pointed pen, three copies of this request were made thereby. When the patient presented this card at the reception desk of the Section on Roentgenology, the clerk had only to ask for the patient's registration envelope, write the registration number of the patient in the upper left hand corner of the referring card as a check on the accuracy of the registration number that the referring physician had written in the right hand corner, and send the card and the film marker, which was made up at the desk, with the patient for the examination. When roentgenologic examinations of the digestive tract were requested, the clerk fixed a roentgenoscopic sheet to the referring card with a metal clip.

Unity of Form for Referring Cards

The same form of referring card was used for all examinations; the part to be roentgenographed was written on a line designated for this information. Separate cards were requested for different types of examinations; this procedure was followed largely to expedite the routing of the patients from the reception desk or to make appointments coincide with arranged schedules. Racks were devised and built to hold the new referring cards and were hung conveniently situated to the rooms in which the roentgenograms were made. These racks held the cards in such a manner that the registration number of one was superimposed on the next and all were visible.

When the roentgenograms had been processed and were ready for sorting, the racks were taken and hung beside the viewing box at which the sorting was done. As the roentgenograms made during each examination were assembled, the corresponding referring card was found and placed on top of them. In this manner the roentgenograms were stacked and made ready for study and report of the opinions by the roentgenologic consultant. The consultant read the card and passed it to a stenographer. The consultant dictated the report and it was typewritten on the referring card directly from dictation. The stenographer then tore the referring card into three separate portions along lines which had been perforated in the process of printing.

A portable typewriter table was devised and built to allow arrangement of the reports and the roentgenograms. The No. 1 portion and the No. 2 portion were placed in separate piles. The No. 3 portion was placed on top of the roentgenograms which, in the meantime, were placed in a compart-

ment designed to receive them, adjacent to the typewriter.

The Department Record Sheet

The No. 1 portion was retained as the department record sheet; the No. 2 portion was returned to the referring physician with the report of the opinion; the No. 3 portion (having a plain back) was pasted and placed on the envelope in which the roentgenograms were to be filed. Each was a duplicate of the other; should any record be misfiled or lost, a copy would be available on the roentgenogram envelope in the file.

The No. 2 portion was ready to be returned to the referring physician as soon as the consultant had interpreted the last roentgenogram at any one sitting. The sheets were sorted into compartments marked for the various desks to which reports were sent, taken from there and placed in envelopes on which routing instructions had been printed, and put in the proper compartment of a continuous carrier system which automatically delivered the envelope and its contained reports. With this arrangement there could be no reason why the reports should not reach the desk of the referring physician within a few minutes of the time that the consultant's opinion was dictated.

The department record sheets (No. 1 portion) were sorted into various groups, according to the part of the body examined, and these groups were subdivided into those containing positive opinions and those containing negative opinions. The sheets of each subdivision were counted and the number of each was tabulated. A daybook (*fig.* 2), ruled and printed to provide spaces for the figures showing the opinions, negative and positive, of examinations of the thorax, bone, head-sinus-mastoid, urinary tract, stomach, gallbladder, colon, small bowel, and miscellaneous examinations for each day, was used for this tabulation. After the close of each year, a chart showing the figures for each month (*fig.* 3), the totals of the subdivisions, the groups, and the grand total for the year, was compiled and made a part of the annual report on the activities of the Section on Roetgenology.

The Ledger System of Recording Observations

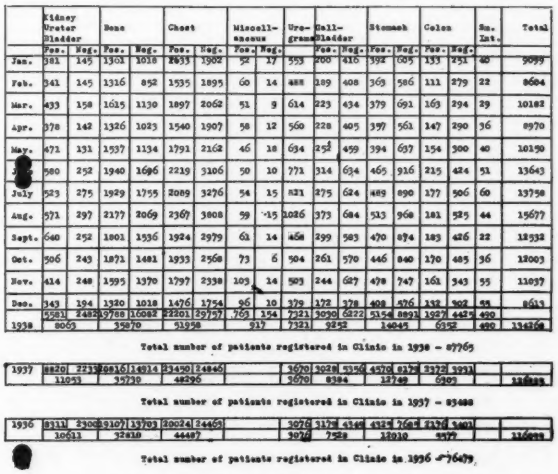
The opinions were then recorded in ledgers, especially devised for this purpose after several years of working with mimeographed forms (*fig.* 4*a*). A sheet of ledger bond paper (24 pound weight)—18 by 10½ inches in dimension, was ruled on both sides to provide 500 spaces of equal dimension on each side. Each space was 1½ inches wide and approximately 3/16 inch deep. A series of vertical lines subdivided the left side of these spaces three times; each subdivision was about 3/16 inch wide. Immediately to the right of these, numerals were printed, running vertically in sequence, in columns of fifty, from 000 to 499 on one side of the sheet and from 500 to 999 on the opposite side. There remained to the right of the numerals a space of approximately 10/16 inch in width.

To accommodate the registration numbers of patients who re-registered and whose registration numbers were lower than those of a current year, an identical sheet (*fig.* 4*b*) was ruled into fifty sections on each side of the paper. Each section contained nine spaces, subdivided on the left end as on the other sheets, but with the exception that there were no numerals printed in. The registration numbers were written in the spaces to the right of the subdivision. The sections were designated by numerals printed in sequence, horizontally across the page, running from 00 to 49 on one side and from 50 to 99 on the other.

With a rubber stamp, in numerals ⅜ inch high, the auxiliary sheets were numbered 000000, 100000, 200000, 300000 and so on to the commencement of the registration number for the current year, after which the complete form was used and the sheets of this form were numbered: 650000, 651000, 652000 and so on to the last registration number of the current year.

These ledgers provided a space for data concerning every patient registering in the clinic; the auxiliary forms brought the registration numbers almost into sequence, and the sheets bearing the numerals printed in routinely brought all entries into perfect numerical sequence.

Two ledgers were used for the recording of the



	Kidney Ureter Bladder		Bone		Chest		Miscellaneous		Urogram	Gallbladder		Stomach		Colon		Sm. Int.	Total
	Pos.	Neg.	Pos.	Neg.	Pos.	Neg.	Pos.	Neg.		Pos.	Neg.	Pos.	Neg.	Pos.	Neg.		
Jan.	381	145	1302	1018	2635	1502	52	17	553	200	416	592	605	133	251	40	9099
Feb.	341	145	1316	852	1535	1895	60	14	488	189	408	369	586	111	279	22	8604
Mar.	433	158	1615	1130	1897	2062	51	9	614	223	434	379	691	163	294	29	10182
Apr.	378	142	1326	1023	1540	1907	58	12	560	228	405	397	561	147	290	36	8970
May	471	131	1537	1134	1791	2162	46	18	634	252	459	394	657	154	300	40	10159
June	580	252	1940	1696	2219	3106	50	10	772	314	634	465	916	215	424	51	13643
July	523	275	1929	1755	2089	3276	54	15	821	275	624	489	890	177	506	60	13758
Aug.	571	297	2177	2069	2367	3808	59	-15	1026	373	684	533	968	181	525	44	15677
Sept.	540	252	1801	1536	1924	2979	61	14	458	299	583	470	874	183	426	22	12532
Oct.	506	243	1871	1481	1933	2568	73	6	504	261	570	446	840	170	485	36	12003
Nov.	414	248	1595	1370	1797	2338	103	14	503	244	627	478	747	161	543	55	11037
Dec.	343	194	1320	1018	1476	1754	96	10	379	172	378	408	576	132	302	41	8513
	5521	2482	9788	16082	22201	29757	763	154	7221	3039	6222	5354	8921	1927	4425	450	
1938	8065		25870		51958		917		7221	9252		14045		6352		450	134268

Total number of patients registered in Clinic in 1938 - 87765

1937	8820	2215	8816	14014	23450	24845			3670	3028	4356	4570	8178	2172	2951		
	11035		35730		48296				3670	8384		12749		6907			126935

Total number of patients registered in Clinic in 1937 - 85488

1936	8111	2300	8107	13703	20024	24465			3078	2178	4146	4324	7648	2178	3401		
	10411		32810		44487				3078	7324		12010		5579			116099

Total number of patients registered in Clinic in 1936 - 76479

Figure 3—Recapitulation of the information from the Daily Register

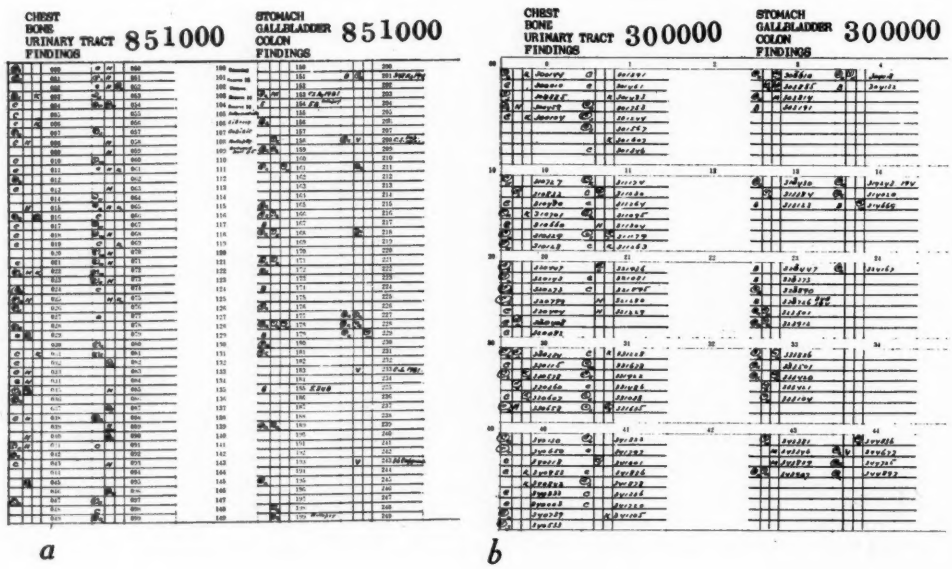
opinions each year. In one ledger the subdivision on the left was assigned to thoracic opinions, the middle one to opinions concerning bones, and the one on the right to opinions concerning the urinary tract. In the other ledger the left hand space was allotted to opinions concerning the stomach, the middle one to data concerning the gallbladder and the right hand one to opinions concerning the colon. Miscellaneous opinions were arbitrarily distributed to one of these main divisions.

The recording was done by using code letters and symbols. A capital letter written in red ink in the proper column indicated an examination of that part with positive results reported. A capital letter written in black ink, with a circle around it, in the proper column, indicated an examination of that part with negative results. The initial of the consultant was appended when the results of examination were negative. The records of all examinations were thus brought automatically into order and made conveniently and quickly available for reference. The recording was done at the rate of about 200 entries in one hour.

Disposition of Department Record Sheets

When the department record sheets had served their purpose in all the procedures of the daily routine, they were filed in drawers, of two compartments each. Those sheets containing positive results of examinations were placed in the left hand compartment, and those containing negative results were placed in the compartment on the right. This file was divided: the department record sheets concerning examinations of the thorax, bone and kidney, were kept together in one numerical sequence, whereas those sheets having to do with examinations of the stomach, gallbladder and colon were kept together in their numerical sequence. This division brought the department record file in agreement with the entries in the ledgers.

When any information was required as to whether a given patient had or had not been examined, or when the roentgenograms made of a given patient were requested, reference to one or both ledgers, as might be necessary, furnished at one glance all the information needed. If the results of examination were negative, no other reference was needed when information only was requested. If roentgenograms showing negative results of examinations were requested, the information in the ledgers indicated the location of the roentgenograms in the file, depending on the time elapsing between the making of the roentgenograms and the request for them. If the roentgenograms had been made more than a year before the request for them was made, it would indicate that they had been discarded. This single entry in code made in the ledger was all the clerical effort required to make a permanent record of all the aforementioned information. If roentgenograms showing positive results of examination were requested, or if information concerning them was required, the entry in the ledger directed the searcher to the department record file or to the roentgenographic file itself, whichever was the more convenient, for the detail of the report. The subsequent arrangement of the department record sheets indicated the location of the roentgenograms in the file, as the entry in the ledger indicated the location of the roentgenograms with negative results of examination.



a *b*

Fig. 4—This sheet, with the numerals printed in (000 to 499 on one side and 500 to 999 on the other), routinely brings all entries into perfect numerical sequence

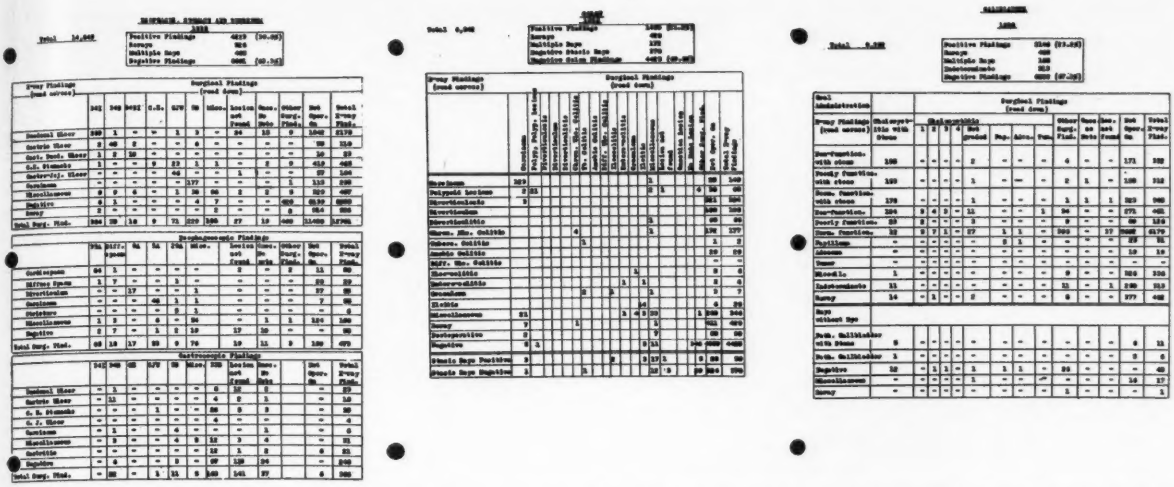


Figure 5—Recapitulation of findings in examinations of the digestive and biliary tracts with results of correlation of the roentgenologic with the surgical findings concerning all patients surgically treated.

Correlation: Roentgenologic With Surgical Observations

Correlation of the roentgenologic opinions in examinations of the digestive tract with the surgical data concerning patients operated on was accomplished by a much simpler procedure than that which has been described. Copies of the surgical findings were obtained and, after being arranged in numerical sequence, were checked against the entries in the ledgers. When a corresponding entry was found, a note of the surgical findings was entered, using code letters and symbols, in the space to the right of the numerals. The corresponding surgical notes were segregated. All department record sheets which agreed in registration numbers with the surgical notes were withdrawn from file and temporarily fixed to their corresponding surgical notes. The surgical findings with a brief note of the surgical procedure carried out and the pathologic findings, when histologic study had been made and reported, were typewritten in red across the face of each department record sheet. At the same time, the department record sheet rested on the roentgenoscopic sheet, which was also withdrawn from the file, and the carboned back duplicated the information on the face of this record. At the time of any subsequent examination, the roentgenoscopic sheet was withdrawn from the file and sent with the patient to the roentgenoscopic department. The consultant, having this information before commencing roentgenoscopic observation, was in a more advantageous position to interpret observations as they presented themselves than he would have been without the roentgenoscopic sheet.

After the close of each year, a summary of the data revealed by this correlation of roentgenologic and surgical findings was compiled and charted (*fig.* 5). With the department record sheets in numerical sequence, it was found more expedient to reindex the positive results of examinations of the digestive tract and gallbladder and also the surgical findings in those that were operated on, than to attempt to check any existing indexes, all of which were in chronologic sequence. Reindexing has been done by one member of the professional staff for many years and the time required never exceeded fifty actual working hours in any single year. The completed summary afforded a comprehensive review of the examinations of the digestive tract and gallbladder made each year, with accurate evidence of the efficiency or nonefficiency of the roentgenologic method of diagnosis of the individual types of lesion more or less frequently occurring in the aforementioned regions. A copy of this summary was given to each member of the permanent staff in the section, and one was kept on file for general reference.

Five filing cabinets (*fig.* 6), of ten double compartment drawers each, were found sufficient to hold the department record sheets and the roentgenoscopic sheets for a two-year period. The sheets were distributed as described, those concerned with the thorax, bone and urinary tract were placed in one group, those concerned with the stomach, gallbladder and colon were placed in another group, and the roentgenoscopic sheets comprised still another group. Each group was subdivided, with the negative results of examinations running on one numerical sequence and the positive results running in their own numerical sequence. After the close of each year, to conform to an arrangement for the filing of roentgenograms, the department record sheets with positive results of examinations were divided into two groups: those containing findings of an intrinsic value clinically or of educational interest, and

those containing incidental findings of little or no value clinically and of no educational interest. The latter were segregated as soon as possible after the close of the year to make them available for reference use in the sorting of the roentgenograms. When this purpose had been fulfilled, the sheets were retained in a separate numerical sequence.

The advantages of having the reports compiled in books for ready reference over the older method of consulting the department record sheets in the file, plus the experience that the cost of assembling all the important data of the department record sheets in books was less than that of purchasing new filing equipment and providing floor space to accommodate it, affirmed the decision to continue the new method. Even with the reduced size of the form, there was an annual expense for equipment and a demand for floor space for expansion which would have become embarrassing again in a comparatively short time. All the data concerned with positive results of examinations of intrinsic value were copied; the registration number, the name of the patient, the date, and a code letter signifying the part or region examined constituted all the information copied in the cases of incidental findings. Such an arrangement coincided with the arrangement of the roentgenograms in the file and reduced the amount of copying to be done each year approximately 66.67 per cent.

The transcribing of the registration number, the name of the patient, the date and the designation of the part or region examined by a code word, provided the most comprehensive and at the same time the most economical method of permanently recording the incidental positive results of examinations. These positive results approximated 28.68 per cent of the total findings in each year. The roentgenograms showing incidental positive results of examinations were put in a reserve file after the close of a current year. The information in these books was all that was needed to locate the roentgenograms in file or to know whether they had been discarded.

Counting the negative and incidental findings, all the essential information regarding 85.68 per cent of the total examinations was permanently recorded by means of this method.

When the complete data of the remaining 14.32 per cent of positive results of examinations were transcribed, the need for additional filing equipment and the floor space to accommodate it was eliminated for all time. There was no need for additional shelving, and would be none for a period of at least twenty-five years.

Figure 6—Filing cabinets for department record sheets, with recording ledgers above and loose-leaf books containing the data of positive findings conveniently adjacent.

Filing of Positive Results of Examinations

The assembling in books of the data concerning positive results of examinations of intrinsic value had many advantages other than the saving of the time and effort of the nonprofessional personnel and the expense of equipment and floor space. It reduced the essential matter of a great mass of material to the most compact form possible. In this orderly arrangement the essential matter was made more convenient and portable than had ever been the case. Members of the professional staff could study it at their desks, or even, under certain restrictions, at their homes.

The contents of these books for many years were checked against the histories contained in the Division of Biometry and Medical Statistics of the clinic, and notes of the clinical or otherwise proved diagnosis in each instance were appended. When the roentgenologic observations made during examinations of the digestive and biliary tracts had been correlated with the corresponding observations made at operation, the records of patients operated on were assembled in one sequence and the records of patients not operated on were assembled in another sequence. The roentgenologic findings were typewritten in black and the coincidental surgical findings were typewritten in red. In the group of examinations concerning the thorax, bones and urinary tract, the records of patients who had been operated on and records of patients not operated on were assembled in one volume; the notes of surgical and pathologic findings were appended to these records in red. This procedure materially reduced the number of cases to be checked against the histories in the Division of Biometry and Medical Statistics. When these books were completed, they afforded a rapid and convenient method of reviewing all available material in the quest for interesting examples to use in seminars, as illus-

trations in publications, or as subjects of essays. The routine accumulation of all these data in such form obviated considerable subsequent duplication and therefore waste of time and effort, and it likewise materially reduced the numbers of histories requested from the files of the Division of Biometry and Medical Statistics.

Floor Space of Department Record System

The five filing cabinets installed when this system was introduced in 1925 have proved to be adequate for the purpose from that time to the present. They occupy a floor space of 6 feet frontage to a depth of 2¼ feet. Fitted to the top of these filing cabinets is a set of two shelves which provides space to hold the ledgers necessary for a twenty-eight year period. The highest shelf is only 5½ feet from the floor, within easy reach of any adult person of normal stature. Fixed to the wall, adjacent to the filing cabinets, two shelves, 52 by 12 by 11 inches, have sufficed to hold the books containing all the important data concerning positive findings from the year 1914 to the present. The floor space requirement for the keeping of department records thus has been reduced from a requirement of 100 square feet to one of 13½ square feet, and has been stabilized at the latter figure since the year 1925.

The ledgers from the time they were introduced to the end of the year 1938, have recorded the opinions in 1,304,753 roentgenologic examinations. The ledgers brought these observations routinely into numerical sequence for each year, thereby affording rapid and convenient reference to any information desired. The ledger entry recorded all necessary information concerning negative results of examinations. The department record sheets showing negative results did not need to be retained after the close of any current year. The negative results of roentgenologic examinations approximated 57 per cent of all observations each year; therefore, the ledger entry reduced the need for space in the filing cabinets to this percentile extent after the close of each year.

Saving of time and effort of the nonprofessional personnel of the clinic was the prime object when the new methods were devised. Elimination of the expense of purchasing equipment and providing floor space for increasing demands of records were compelling factors in initiating investigation of the subject. The results have more than justified the expense of the compilation of all important data in book form. In the management of the roentgenograms, to be discussed later, these books provided a method by means of which a definite proportion of the roentgenograms showing findings of intrinsic value retained in permanent files could be reclassified, after correlation of these with all the findings of the other methods recorded in the general history of each patient in the files of the Division of Biometry and Medical Statistics. These roentgenograms were either discarded or transferred to reserve files, from which they were automatically discarded at a later date. The economy effected in the requirements of floor space, plus the revenue from the sale of discarded film, represented a sum which greatly exceeded that of producing these books. The cost of compilation of the data in book form, under the present arrangement, has never exceeded $250 for any one year.

Advantages of New System: Speed, Economies

The advantages accruing from the installation of this new system are considered in the abstract: quickening of service at the reception desk of the Section on Roentgenology; saving of time and effort of the professional staff; return of the report to the referring physician with a minimal interim, and conservation of the time and effort of the nonprofessional personnel in the duties of their daily routine. Concrete evidence of economies gained is best exemplified in Table 1.

With the use of the new system, a saving in the cost of printed material of $839.95 and 4,304 hours of labor was effected in the year studied. The labor, at the minimal salary paid for any part of the work, represented a cost of $1,354.29. The demonstrable saving totaled $2,194.24 in that year; divided into the number of examinations made (92,433) a saving of 2.37 cents on each examination is shown. This saving has continued through the years subsequent to 1926; in the period in which this system has been used (1926 to 1938, inclusive), the saving effected by the use of the "x-ray referring card" has aggregated more than $30,000. Part of this saving can be credited justly to the use of the recording ledgers. Prior to 1926, there had been no recording of the opinions other than the records available on the department record sheets in file. Since that year the ledgers have afforded a record of all findings, in numerical sequence for each year, so arranged that reference to them can be made with a minimal expenditure of time and effort. The entry in the ledger records all possible information regarding negative results of examinations (57 per cent of all observations) in a permanent form and has made it unnecessary to retain any other forms of recording negative results of roentgenologic examinations in the department files.

In the routine correlation of the roentgenologic with the surgical and pathologic findings in patients who had examinations of the digestive or

biliary tract, or both, and who were operated on, an entry in code letters and symbols in a 10/16 inch space in the ledger, added to other entries made at the time of the roentgenologic examination in a 9/16 inch space on the same line, also in code letters and symbols, permanently recorded all the basic information contained in the massive statistical ledgers that had been used in the old system. These entries are made with pen and ink with infinitely less expenditure of time and effort than had been expended before.

The ledgers routinely brought all entries together and into numerical sequence. The minute details of all the entries are on the department record sheets and these are filed in numerical sequence. There is therefore no necessity for indexing any entries. After all the data had been assembled in the old statistical ledgers, they were in chronologic sequence. The compiling of statistical information from records in chronologic sequence was a tedious task and the accuracy of the information was always doubtful. The ledger entry and the department record sheet routinely keeps this information almost instantly available at all times. A summary of all pertinent data after the close of each year is a matter of hours rather than one of days, and the information contained in this summary is as nearly accurate as it is possible to make it by using any method.

In the writing of the data of the surgical notes on the department record sheets by means of carbon paper, these data are typewritten on all the sheets concerned synchronously, a procedure which further reduces the expenditure of time and effort necessary to maintain this service. Results of examinations of the gallbladder had not been included in the entries in the statistical ledgers of the old system; accurate statistical information concerning these examinations has been added to the routine of the new system.

The arrangement of the findings in separate columns in the ledger has provided a rapid and convenient method of computing the number of patients who have been examined in a single year, of learning how many patients have been registered in the clinic but who did not have roentgenologic examinations, and of learning how many patients had examinations of a single part or region, multiple examinations or various combinations of examinations. The space to the right of the numeral is used to record all additional useful information pertinent to the individual examination recorded. With the use of small rubber stamps (5½ point type) it is recorded that intermediates for the making of lantern slides or reproductions for exhibits have been made from given roentgenograms, that others have been sent to reserve files, or have been discarded. This procedure is the most rapid and accurate method of recording any and all information, because it brings all entries automatically into numerical sequence and obviates the necessity for writing in numbers or any accessory information. When all these entries are made routinely the finished process constitutes a permanent record of all necessary information, conveniently available for reference, with a minimal expenditure of time and effort.

Disposition of Roentgenograms

The filing of roentgenograms is, or may become, a problem in every institution. Unless some definite plan of routinely valuing roentgenograms and segregating them according to their value is adopted, they may entail a considerable expense on the one hand or the loss of records of outstanding scientific value on the other.

In the Mayo Clinic, it was decided, after mature consideration, that roentgenograms in which the findings were negative would be retained for a period of one full year and would then be discarded. A study of the reports of positive findings revealed that approximately two-thirds of these were incidental in routine examinations and that they had little or no clinical significance. They included anomalies of development in osseous structures, abnormalities which were the result of congenital aberration of normal development in other tissues or residual effects of pathological processes at more or less distant dates. Other lesions which were the result of senescent processes were frequently seen. None of these had had any interest as an etiologic factor and after the patient had been dismissed from the clinic, the roentgenograms would have little or no value. It was decided that these roentgenograms would be retained in file for a period of five years and would then be discarded.

As previously stated, negative results of examination represented 57 per cent of the total findings; these incidental findings approximated another 28.68 per cent. The arrangement now in use, therefore, segregates 85.68 per cent of all the roentgenograms made and provides for discarding them without further expenditure of time or effort on the part of any member of the professional staff. The remaining 14.32 per cent of roentgenograms are filed in one numerical sequence, after the close of each year, with the roentgenograms of intrinsic value made in preceding years, in a permanent file.

A vault incorporated into the administrative department of the Section on Roentgenology provided filing facilities for those roentgenograms showing positive findings made during the current

year and those with negative findings made during a period of two months. The space for those roentgenograms containing negative findings, was divided equally; those made in one month were filed in one section, those made in the next month were filed in the other section. At the commencement of the third month, the roentgenograms of the more distant month were taken to a storage room situated in a building of fireproof construction, some 300 feet from the clinic building, and accessible from the outside and also by an underground tunnel connecting the building to the clinic. There the roentgenograms are placed on steel shelves, roentgenograms made each month in numerical sequence, with guide cards interposed indicating the month.

Space is provided to hold those roentgenograms containing negative findings made during a two-year period. When this space is exhausted, roentgenograms of the more distant months are discarded and are sent to a warehouse, where the films are stripped from their envelopes, and tied in twenty-five pound bundles, and stored for future sale. The envelopes are packaged and sent to the stock room to be used again.

Roentgenograms Containing Incidental Observations

After the close of each current year the roentgenograms containing incidental observations are withdrawn from file and placed in numerical sequence in a series of compartments built above those of the current file in the vault mentioned. Members of the nonprofessional personnel, taking the department record sheets which have been segregated as previously described, match these with the duplicate used as a label on the envelopes and cull all envelopes with labels in agreement with the department record sheets.

A movable ladder, suspended from the ceiling, has been placed in each aisle of the vault to afford convenient access to the upper tiers of compartments. The roentgenograms remain in these upper compartments for one full year and then are transferred to the same room used for the storage of roentgenograms with negative findings. Each year's accumulation of roentgenograms with incidental findings is retained on steel shelves in its own numerical sequence. Space is provided to hold roentgenograms of this type made during a five-year period. When this space is exhausted, the roentgenograms of the more distant year are sent to the warehouse, where they are handled in a manner similar to that described for roentgenograms containing negative findings.

Roentgenograms With Valuable Findings

The remaining roentgenograms, the findings of which give them an intrinsic value, are taken to an auxiliary vault situated two floors below the clinic building and are there filed as has already been described.

The chief object of this arrangement is to avoid, whenever possible, the filing of roentgenograms into numerical sequence with other groups. It was found that this could not be done at a rate of more than 950 sets (enclosed in envelopes) per day. It was also found, when necessity demanded such a procedure, that roentgenograms could not be culled from any file in any number of greater than 950. For example, to file this group of roentgenograms with incidental findings in any of the later years would have entailed 46.5 days of labor and approximately the same number of days to cull them at some later date. A saving of ninety-three days was effected, therefore, when these roentgenograms were segregated after the close of each year. By storing these roentgenograms for one year in compartments above those of the current year file in the vault, they were made more conveniently accessible than they would have been had they been sent directly to the storage room soon after the close of the year.

Segregating the films with the aid of the department record sheets allows the work to be carried on as part of the daily routine whenever time permits. The roentgenograms were not shifted en masse after the close of each year. Culling sufficient to afford room for filing roentgenograms of the current year is all that is necessary. This process obviates any marked disturbance of the normal routine of the section and is a factor in economizing the time and effort of the nonprofessional personnel.

Another important object is the conservation of space in the auxiliary vault, which, because of the nature of its contents, has to be situated in the clinic building, as conveniently accessible as possible to the administration department of the Section on Roentgenology. The capacity of this vault is 375,000 sets of roentgenograms. Allowing space in each compartment for the filing of roentgenograms made in subsequent years, it is doubtful whether more than 300,000 sets could be properly accommodated in the vault. Roentgenograms made prior to 1930 were manufactured of inflammable material; these have been sent for storage in a warehouse located outside the limits of the city.

The file in the auxiliary vault contains roentgenograms showing positive findings with intrinsic values during and after the year of 1930. Had all roentgenograms showing positive findings been sent to this vault at the close of each current year, the available space would have been ex-

Table 1

COMPARISON: *hours of labor required and costs; old system of roentgenologic files and system now used at Mayo Clinic*

OLD SYSTEM: Expenses for one year.*

Material used	*Cost*	*Labor*	*Hours*
Urinary tract sheets	$ 104.45	Writing forms at reception desk	1,844
History sheets (bone)	116.81		
Chest sheets	247.05	Transcribing reports to general referring card	1,844
Gallbladder sheets	32.31	Assembling refer card and report sheet	616
Digestive tract sheets	276.00		
General referring cards	158.06	Transcribing data on envelope of roentgenogram	1,386
Statistical ledgers (digestive tract)	299.21		
	$1,233.89		5,690

NEW SYSTEM: Expenses for one year.*

Material used	*Cost*	*Labor*	*Hours*
X-ray referring cards	$369.73	Typing reports on x-ray referring cards	693
Statistical ledgers (all observations)	24.21	Pasting and fixing labels on envelopes	693
	$393.94		1,386

*These figures were obtained by checking the costs of material and having the same experienced clerk carry out the routine procedures of each system. The estimates were based on the number of examinations made in the year 1926, which was 92,433.

hausted by the end of the year 1936. Since the roentgenograms containing incidental findings are segregated as previously described and are not sent to the auxiliary vault en masse, the space requirement for each year is one-third of what it would have been had such segregation not been done. This vault is equipped with a sprinkler system and a ventilating device, both controlled by a mechanism released automatically in case of fire. It is so situated that expansion or duplication of its capacity would entail some difficulties and considerable expense.

The storage room to which the roentgenograms showing incidental findings are finally sent is situated in a building of less expensive construction than that containing the aforementioned vault. A conservative estimate of the value of the space in the auxiliary vault is $2,116.00 (1,058 square feet at $2.00 per square foot) per annum. When roentgenograms containing incidental findings were filed in this vault, they occupied two-thirds of the space each year; it therefore cost $1,410.50 a year to keep them there. The value of the space in the storage room is only $1,080.00 (1,080 square feet at $1.00 per square foot) per annum. At the end of the first five-year period, when the roentgenograms of the most distant year were discarded, the revenue accruing from sale of the films approximated $1,500.00 annually.

The space required in the storage room to retain roentgenograms containing negative results of examinations is 288 square feet. This space represents an overhead charge of $288.00 per annum. When the roentgenograms are discarded, the revenue from the sale of film averages more than $2,000.00 each year.

Advantages of the Storage System

When this plan became fully operant, it eliminated any subsequent filing in numerical sequence in 85.68 per cent of all the roentgenograms made in each year. It segregated these with a minimum of inconvenience to the service of the Section on Roentgenology. One member of the professional staff, qualified by experience, segregates the department record sheets in not more than fifty hours of time and effort each year. This plan has proved to be the simplest and most accurate of any method used and it is accompanied by the least possibility of losing any roentgenograms that might have any future clinical or other interest. Operation of the plan has made no further demands on the time or effort of any member of the professional personnel other than the time and effort previously mentioned.

The arrangement retained all roentgenograms for a sufficient length of time to meet every reasonable request which might be made by any of the sections of the clinic or any individual member of the professional staff of the clinic. The storage space necessary to accommodate this system represents an overhead charge of $1,368.00 (1,368 square feet at $1.00 per square foot) per annum. The revenue accruring each year from the sale of discarded film approximates $3,500.00.

Future Methods of Storage of Roentgenologic Material

Experience has proved that after five years, very few roentgenograms in the permanent file will be required by the return of any one patient to the clinic. These roentgenograms are wanted,

when they are wanted at all, largely for study, for the illustration of scientific literature, for lantern slides for reproduction in exhibits, or for use in seminars or other educational meetings. Improvements in photographic technic have made it possible to secure reductions of large roentgenograms in which the roentgenographic image is equally brilliant as, and in some cases even more brilliant than, that of the original roentgenogram. The projection of these reductions, or reproductions of them, in considerable magnification has been accomplished with a surprisingly small degree of alterations of detail.

There is every reason to believe that reduction of roentgenograms, preferably to 35 mm. in size, for storage purposes, will in the near future become an accomplished and accepted procedure. The cost of making an intermediate positive in rolls and reproducing this positive to provide negatives which will be facsimiles of the original roentgenogram will be comparatively small. These negatives could be framed individually, and projectors devised to use them as lantern slides are already being sold. The work that has been done to the present would suggest that it would be expedient to make two copies of every master roll and divide the individually framed negatives into two series. One series would be retained in the administration department of the Section on Roentgenology in numerical sequence; this series would replace the file in the auxiliary vault or in other situations. The other series would be maintained in an anatomic and pathologic grouping for purposes of study. The latter series preferably should be made a part of the library of the hospital or institution concerned, where access to the literature is easily available and synchronous study of roentgenograms and literature concerning a given entity is possible.

The administration of such a file would be more efficient and less expensive under the direction of a trained personnel. The system of control of the books and periodicals could be applied easily to the handling of the miniature roentgenograms. A central library would on many occasions have an advantage in convenience and would obviate duplication or unnecessary making of lantern slides and the expense involved.

With the perfection of this process will come the stabilization of requirements in floor space for many years.

At the Mayo Clinic, some work has been done on the arrangement of the file of roentgenograms that were manufactured of inflammable film and glass plates and that were stored in the warehouse situated beyond the limits of the city of Rochester, to put this file in order for subsequent reduction. The impression gained has been that the revenue accruing from the sale of the film after the roentgenograms have been reduced and thus copied would do much toward meeting the expense of the process of reduction. It seems possible that it could even be made a self-liquidating project.

Even disregarding the value of the salvage of material, the advantages gained in the reduction of the roentgenograms to millimetric dimensions for storage purposes would more than compensate for any reasonable expense incurred in such reduction.

If and when recording ledgers, important data of the positive results of examinations compiled in books, and miniature reproductions of the roentgenograms can be assembled in one unit and contained in a single room, then one of the most acute problems shared equally by the roentgenologist and the business administration officer, namely, the provision of floor space and storage equipment, will have been solved for many years to come.

Arizona Hospital Association

At the Arizona Hospital Association meeting in Phoenix on February 2 and 3, the following officers were elected:

President—Dr. Roland Davison, Medical Director of the Desert Sanatorium, Tucson, Arizona.

Vice-president—Dr. Hal Rice, Copper Queen Hospital, Bisbee, Arizona.

Secretary-Treasurer—Dr. Charles W. Sechrist, Flagstaff, Arizona.

Arizona is the latest state association approved for affiliation as a section association of the American Hospital Association. Full approval was given by action of the Board of Trustees at their meeting in Chicago, February 12.

Postoperative Wound Infection

A western hospital experienced recurrent cases of wound infections in clean cases. After a painstaking study of possible sources of infection, it was noticed that all the infections occurred in patients who had been operated upon on Wednesday. Further sleuthing developed the fact that the orderly's schedule included cleaning and polish the water sterilizers on Tuesday afternoon, and that in so doing he ordinarily left some of the polishing powder adhering to the inner surface of the draw-off spigots of these tanks. Cultures from this powder were positive. Discontinuance of the use of the polishing powder was followed by cessation of wound infections.

Development of the Hospital as a Health Center Through Its Out-Patient Department

NATHAN SMITH, M.D., F.A.C.H.A.

The Author

● **Dr. Nathan Smith is the Deputy Medical Superintendent of Morrisania City Hospital, New York City.**

LEADERS in the field of public health are in accord that the basic preventive activities must be interrelated with the program for the treatment of illness as carried out by the medical profession, their allied professional personnel, and that the out-patient department occupies an essential and strategic position in the fostering of health programs.

As in a health center, so in an out-patient department, health education is an important activity. The staff of physicians, nurses and social workers should avail themselves constantly of every opportunity to educate themselves and others in the teachings and doctrines of disease prevention, health protection, and some of the basic principles of epidemiological practice.

During their staff conferences, physicians should discuss findings and treatment of clinic patients and point out how any errors in management which may occur may be avoided in the future. Physicians should also participate in talks given to patients during various programs conducted for pre-natal and diabetic patients.

Graduate and student nurses assigned to out-patient departments should stress at their nurses' conferences health education measures to be taught to clinic patients. Nurses should participate in demonstration and conduct classes for the benefit of many clinic patients.

Personal as well as group instruction should be carried out which should cover numerous phases, such as self-administration of insulin, instruction in dietetics and nutrition, adequate dress for infants and adults, instruction in carrying out home nursing measures and exercises advised by physicians, instructions in maintaining personal hygiene and preparation for motherhood.

Health posters of educational value should be placarded in various sections of the out-patient department and a large amount of literature, leaflets and pamphlets, should be distributed to patients to enlighten them on the subject of communicable disease control, care of infants, and adequate diets. The important educational material mentioned above could be obtained through the official health agencies.

As to the advisability of housing a health clinic in the out-patient department under the same roof. I have mingled feelings on the subject. Perhaps in some communities the two departments can work together in harmony to the advantage of the taxpayers and the public at large. In our city, however, I would not proffer such a plan but would rather concentrate on a further analysis as to how to avoid duplication of the same work in the two departments, bearing in mind that the treatment of patients should be conducted under hospital control and health education on a broad scale under Department of Health supervision. I would rather suggest that the out-patient department be subsidized with public funds for furnishing or assisting in the maintenance of an adequate medical social service, public health nurses and physicians and that these public funds should be administered by responsible public authorities.

Although out-patient departments are primarily endowed for the care and treatment of ambulatory sick, they also play an important role as community health centers. Among the public health activities they often conduct similar programs in the field of maternity, child hygiene, social hygiene, tuberculosis control and mental hygiene.

Communicable Disease Control

Each year the out-patient department reports to the Department of Health many minor and major communicable diseases. In each instance physicians, nurses, and social workers should give advice, not only for the treatment of contagious

patients but also for the care of contacts so that the further spread of the disease is prevented. Wherever possible the source of infection should be sought and epidemiologic investigation undertaken to some extent. In the tuberculosis and social hygiene clinic the training in finding the source of infection should be of paramount importance. Case holding under continuous adequate treatment until the patient is no longer a danger to his family and the community should be particularly stressed.

Pre-natal Service

In the pre-natal service, the care of the mother and the developing infant rightly belongs to the hospital where it is generally agreed that the pre-natal, neo-natal and post-natal care of the mother be conducted under the supervision of the same physicians if possible.

Out-patient departments, besides rendering adequate medical care, conduct mothers' clubs for instruction of pre-natal patients in order to prepare the mothers and their offspring for healthy life and to inform them how to keep well. In addition to the doctors' conferences a trained staff of nurses is assigned to interview mothers at the time of their visits to the out-patient department to instruct patients to recognize pathologic signs, advise them as to proper clothing and diet, prepare them for delivery and give them instruction for the care of the baby. Social workers are always ready to assist in adjustment of family medical social problems and make visits to patients' homes when patients are lax in visits to the clinic.

Baby Welfare Clinics

Baby welfare clinics are conducted in many dispensaries. The directors of obstetrical services often prefer to follow up the babies born in their institutions under the supervision of the clinic pediatric service. In these clinics they offer supervision of feeding problems of infants. The pediatric staff, thoroughly trained in the care of the well and sick infant, is logically the proper authority to sponsor this program. In addition every effort is made to discover and correct physical defects.

Social Hygiene

Although the field of social hygiene education is the responsibility of the Department of Health, the actual treatment of patients is the responsibility, according to the economic status of the patients, of the private practitioner or of the out-patient department and only where these combined facilities are inadequate should the Department of Health treat the patients. The carrying on of a social hygiene public health program in an out-patient department is a very important activity as the health of contacts will depend largely on the instruction given to the patient. Educational features are promulgated in the conduct of this service and the responsibility of the relationship of the patient to his family and the community in personal hygiene is stressed. The professional staff of physicians, nurses, and social workers in this service is always on guard in tracing sources of infection and in impressing upon the patient his responsibility to the family and the community. The consequences of interrupted and irregular treatment as related to the patient's recovery and prevention of future complications as a burden to society are emphasized.

Tuberculosis Control

Since it is officially recognized by public health authorities that the treatment of tuberculosis patients should be considered as a family problem, no one is better qualified than the hospital and its out-patient department to carry on a tuberculosis health program.

Here both the sick patient and his family contacts are followed up and treated. Educational measures are taken to impress the family with the dangers to themselves and the community in cases of neglect. Contacts, although well, are examined periodically, when the patient is not removed from the home. Social service workers make all the necessary home visits and teach the family members personal hygiene and adequate nutrition. Social workers make the necessary arrangements for financial adjustments of the patient's family needs, reducing the mental strain on the patient, giving him a better opportunity to return to health by relieving him of the anxiety of leaving a destitute family behind.

Mental Hygiene Clinics

Mental hygiene clinics are being introduced into some of our out-patient departments. Here facilities are available for psychiatric examination of children and adults. A study of the social background and, particularly in the case of a child, of the environment in which he lives, plays, and works, makes possible hopeful adjustments and frequent relief. It differs from the other clinics in that it takes into account not only the individual but his entire milieu.

Among the other clinics which play an important role in public health but space does not permit me to discuss more fully, are dental, orthopedic, gonorrhea, syphilis, cardiac, cancer, diabetic, tumor and nutrition.

In conclusion I wish to emphasize the following:

1 That it is the duty of the hospital through its

out-patient department, through the logical extension of its medical activities, to create and maintain a preventive health program to meet the needs of the community.

2 That the out-patient department should provide a well rounded service to include pre-natal, baby health, tuberculosis, venereal, mental hygiene, cancer, vascular, cardiac, orthopedic, diabetic and other clinics that are intimately related to the well being of the individual and the community.

3 That the out-patient department, a necessary prop to the underprivileged, should be subsidized with public funds for furnishing or assisting in the maintenance of an adequate medical social service, public health nurses and physicians.

4 That the establishment of these clinics opens to the younger and older graduates of medicine alike opportunities to see different types of cases and provides a greatly improved quality of medical service.

Dr. George L. Wessels, Superintendent of Allegheny General Hospital

At a meeting of the Board of Directors held on January 22, 1940, Dr. George L. Wessels was appointed to the position of superintendent of Allegheny General Hospital, Pittsburgh, Pennsylvania. Dr. Wessels has been acting superintendent since June 1, 1939, and previous to that time was assistant to the superintendent, Dr. G. Walter Zulauf, who died on May 8, 1939.

Dr. Wessels was graduated from the School of Pharmacy of the University of Pittsburgh in 1916. He returned to the University of Pittsburgh and obtained a B.S. degree in 1925. In 1927 he received his M.D. degree from the School of Medicine of the University. He has been a member of the staff of the Allegheny General Hospital since 1930. From 1932 to 1935 he was admitting physician and carried on a general medical practice from 1928 until he became acting superintendent.

Dr. Wessels is a member of the American College of Hospital Administrators; the American Hospital Association; the Hospital Association of Pennsylvania; the American Medical Association; the Medical Association of Pennsylvania; the Allegheny County Medical Society; Phi Beta Pi, medical fraternity, and Kappa Psi, pharmaceutical fraternity. He is also Secretary of the Hospital Conference of Pittsburgh.

Ultraviolet Sterilization of Air

Recent studies in the sterilization of air by use of the ultraviolet ray indicate that variations in relative humidity between thirty-five and ninety-five per cent, or of temperature within normal ranges do not alter its effectiveness.

In a duct delivering 5,800 cubic feet of air per minute it was found that forty lamps killed 99.5 per cent of all bacteria passing through the duct, while thirty-two lamps killed 98.2 per cent.

It requires a definite amount of radiation to kill a given percentage of bacteria as they move rapidly through the duct. Intensity of radiation is greatest at the surface of the lamp, but falls off rapidly as the distance from the lamp increases. It is, therefore, most economical to place the lamps in such a manner as to provide uniform intensity throughout the cross section of the duct.

The sterilizing action is cumulative, and the lamps should be placed in a straight section at least twice as long as the lamp section.

The time-intensity relation is reciprocal; that is, as the intensity increases the duration of exposure may be increased.

Ultraviolet sterilization of air has the advantage that it neither adds anything to nor takes anything from the air.

The Duke Endowment

The Duke Endowment in the Fourteenth Annual Report of the Hospital Section for 1938 states that "Hospitals for short stay illnesses in the United States in 1938 cared for 95 per cent of the 9,500,000 patients treated in all hospitals. The large group of hospitals that take care of chronic cases, that is, patients requiring a considerable period of hospital treatment, the mental hospitals, tuberculosis sanatoria, and hospitals for crippled children, with 60 per cent of the total hospital bed capacity in the United States, admitted only four out of every 100 patients treated in our hospitals during 1938."

The Duke Endowment has contributed during the past four years a total of $12,393,397.11 to 157 hospitals located in 83 of the 146 counties in the two states, North and South Carolina. Of this amount $9,577,261.95 was for free-bed days for patients unable to pay, and $2,816,117.16 for construction, equipment, or purchase projects.

Ultraviolet Light in Hospital Practice

ELIZABETH CHANT ROBERTSON, M.D.

ONE of the big problems in children's hospitals is the danger that sick infants sometimes pick up new infections during their stay in the hospital. These infections may be spread in at least two ways: (1) by the hands of the attendants and by other articles; (2) by the air.

Until about five years ago the spread of bacteria in the air was thought to be by means of droplets which were coughed or sneezed out. Such droplets travel only a few feet and sufficient space between the beds would control this mode of spread. However, the work of W. F. and M. W. Wells[1] has shown that bacteria in very small particles or "nuclei" can remain suspended in the air for two or three days, and this strongly suggests that air-borne bacteria may play a part in the spread of disease in the wards.

That ultraviolet lamps can be used to kill air-borne bacteria has been demonstrated by several investigators. For example, Deryl Hart[2] reported that when he operated under a battery of 8 tubular ultraviolet lights, the wounds in extensive operations showed infection less frequently and healed more rapidly and the patients developed less postoperative pyrexia. When the lamps were used, very few organisms grew on agar plates set out in the operating room. Without the lamps, the counts were much higher. Ventilating the room with washed air also reduced the number of air bacteria. Miss Doyle and the author[3] counted the number of bacteria in the air of an operating room of the Hospital for Sick Children, Toronto, which was equipped with a similar air-sterilizing unit. We obtained similar results, although we used an air sampling device which was better than exposing plates. McKhann of Boston[4, 5] found a light barrier in a corridor effective in preventing the spread of chickenpox in an isolation ward. Wells[6] has reported an experimental study in which ultraviolet light barriers prevented bacteria passing from one part of a room to another. The Cradle Society[7] in Evanston, Illinois, have already installed ultraviolet light barriers designed by Mr. Wells, in some of their cubicles for new born infants. The Children's Hospitals both in Philadelphia[7] and Boston[7] are putting in similar installations. It will be some years before the effectiveness of these ultraviolet light barriers in preventing cross infections will be known.

The Author

● Dr. Elizabeth Chant Robertson is a member of the staff of the Department of Pediatrics, Hospital for Sick Children, Toronto, Canada.

Present Investigation of the Effectiveness of Ultraviolet Light

For some years we have been working on the effectiveness of ultraviolet light in killing air bacteria here in the Hospital for Sick Children in Toronto. The present investigation was carried out by means of a cooperative effort between that hospital and the General Electric, both the American and Canadian companies. We first converted one of the rooms in the laboratory into a small model ward. It was divided into four cubicles, about 4 feet by 5 feet in size, by partitions which ran from the floor to the ceiling. (Fig. 1.) An air-conditioning system was installed by which air was brought into the back of each cubicle near the floor and exhausted at the ceiling. Any amount of fresh air, from 10 to 90 per cent, could be introduced.

From a nursing standpoint it is not feasible to have doors at the front of the cubicles so a curtain of ultraviolet light was used instead. To produce this, General Electric sterilizing lamps, which are low pressure mercury vapor lamps, enclosed in ultraviolet transmitting glass were used. They are 18 inches long and 1 inch in diameter. Ninety-five per cent of their radiation has a wave length of 2537 A. which is shorter than the shortest U-V in sunlight and is very deadly to bacteria. In order to prevent sunburn and conjunctivitis the lamps were baffled by placing them between two parallel sheets of cardboard, so that the light came out in a narrow sheet. (Fig. 2.) The lamps produce neg-

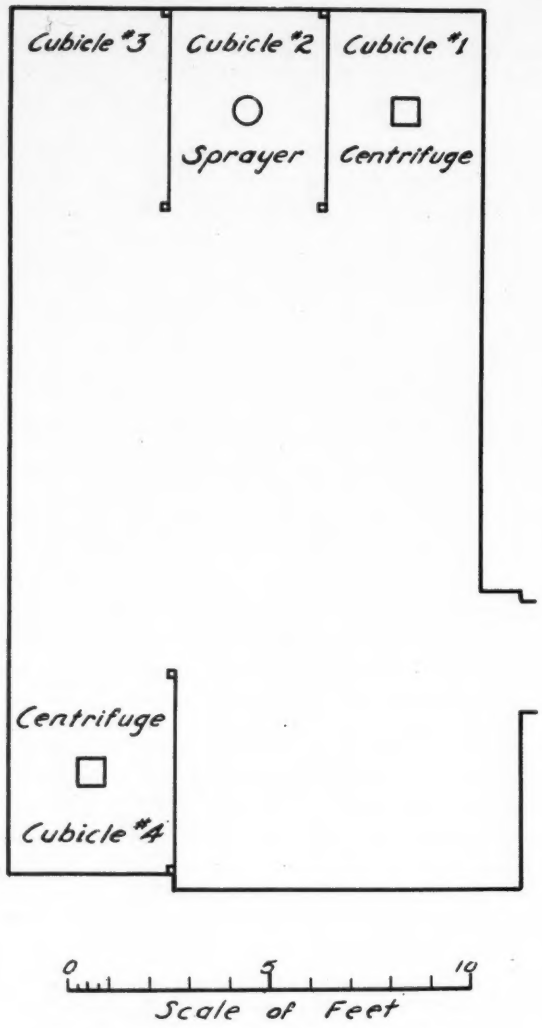


Figure 1—Floor Plan of Experimental Room

ligible amounts of ozone. Two lamps shining down were mounted above the entrance to the cubicles and two on either side, shining across. The both side lamps were below the eye level of adults. (Fig. 3d.)

To test the efficiency of the lamps, broth cultures of harmless bacteria (B. prodigiosus) which produce very distinctive bright red colonies were sprayed by a very fine atomizer run by compressed air. The sprayer was placed in the center cubicle (No. 2). It was usually run for two minutes. The bacteria in the air were then counted in several of the cubicles by means of Wells' air centrifuges which are simple devices for counting the number of bacteria in measured volumes of air.

In one of these tests, for example, one centrifuge was placed in the cubicle where the sprayer was and another was placed in the next cubicle and the U-V lights were turned on. After two minutes' spraying the number of bacteria in the air were counted simultaneously by both air centrifuges at gradually increasing intervals. You can see how few of the bacteria can get out through one curtain of ultraviolet and in through another. (Table 1.)

In many other tests the following technique was followed. With no ultraviolet lights on, the sprayer was run for 2 minutes and bacterial counts were made in the next cubicle (cubicle 1) at intervals. The results shown opposite Exp. 1, Table 2, were obtained. Then the U-V lights were turned on and the sprayer turned on again, using the same bacterial culture. Then bacterial counts were made as before in the next cubicle. (Opposite Exp. 2.) At least 95 per cent of the bacteria were killed. We tested out various arrangements of the lamps hoping to avoid having to use them all, but the final conclusion was that six at each cubicle entrance were necessary for effective killing.

Effect of Air-Conditioning on Set-up

We then tested the effect of the air-conditioning on our set-up. First of all we wanted to know how effectively bacteria in the air ducts could be killed by these U-V lamps. Four of the lamps were therefore mounted end to end in one duct which was 12 inches square and was lined with matte finish aluminum foil. The air-conditioning system was turned on, using 90 per cent recirculated air. The sprayer was run for 15 minutes continuously so that there was a heavy concentration of bacteria in the air and in the air ducts. One Wells air centrifuge was then connected by means of a heavy rubber tube to a hole in the air duct a short distance in front of the U-V lamps and the other centrifuge in the same manner was connected to the duct a short distance behind the lamps. Air samples were then taken with both centrifuges simultaneously. The results show with a relatively

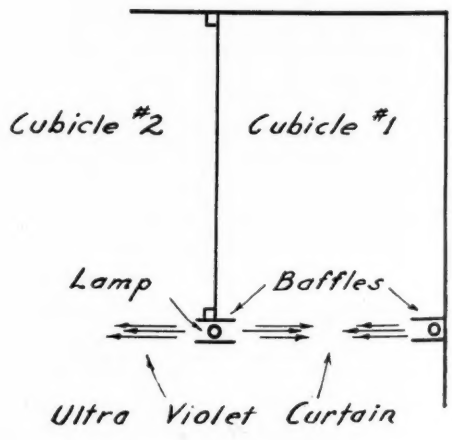


Figure 2—Section through cubicles 1 and 2 to show the arrangement of the baffles.

TABLE 1

NO AIR-CHANGING ON—ALL CUBICLE ULTRAVIOLET LAMPS ON

Time after spraying* started (min.)	2	4	8	16	32	
	Bacteria per cubic foot air					*Spraying*
Samples taken beside sprayer (Cubicle 2)	27,000	21,000	29,400	11,630	3	16 min.
Simultaneous samples taken in next Cubicle (1)	153	106	91	117	0	16 min.

*Harmless bacteria.

slow rate of air movement, 200 linear ft. per minute; one lamp kills 97 to 99 per cent of the bacteria. (Table 3.) When the air flow was increased to 450 linear ft. per minute, 96 to 99 per cent of the bacteria were killed by the four lamps in a row. (Table 3.)

What happens when air changing is combined with the ultraviolet lamps? This of course would have the effect of hurrying the bacteria past the ultraviolet lamps. When the rate of air changing was kept down to 4 changes an hour or lower, the lamps were still effective. When it was increased to 9 changes an hour the lamps were less effective. To get the maximum effect of the lamps therefore, the rate of air movement must be slow.

We also checked our method by means of Wells' method. In this, bacteria are sprayed continuously and after 20 to 25 minutes the number of bacteria in the air of a closed room becomes constant. This was verified by taking air samples at 7 minute intervals in the next cubicle to the sprayer. Then the ultraviolet lamps were all turned on, and with the sprayer still going, more samples were collected until the number in the air became constant again. Then the lamps were turned off, but the sprayer still left on and more specimens were collected every seven minutes. After some time these again reached a constant level. Then the sprayer was turned off and three more samples were collected to show the rate at which the bacteria settle to the ground or leak out of the room. The results of one such test are shown in this slide. (Table 4 and Fig. 4.) You can see how very effective the lamps are in killing bacteria.

Planning a Cubicle Ward for Infants

With this information to guide us, we had the hospital architect plan out a six cubicle ward for infants which is now completed. The floor plan is shown in this slide. Each cubicle has six ultraviolet lamps at its entrance, which are equipped with aluminum reflectors and are baffled. Each cubicle has an air supply and return connected with the air conditioning system. Each has a separate sink with foot-controlled faucets. Each has special solutions which we have found effective for disinfecting the hands. Each cubicle is in fact a complete unit. This slide shows a general view from the outside; the next a view down the small central corridor; the next a single cubicle, and the next some of the details of the lamps.

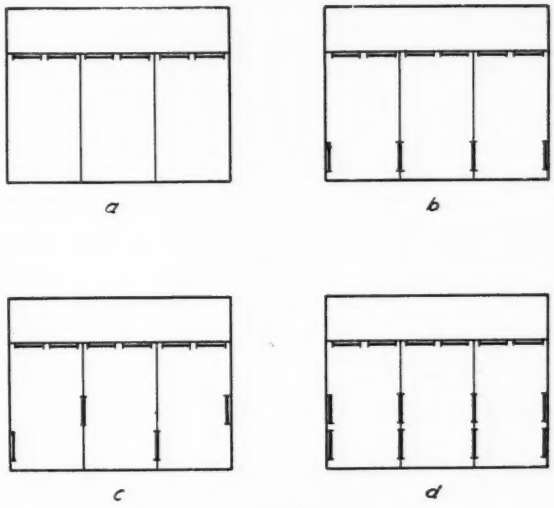


Figure 3—Diagrams of entrances to cubicles 1, 2, and 3, showing the different arrangements of ultraviolet lamps —(a) two top lamps only; (b) two top lamps and one side lamp (lower only); (c) two top lamps and one side lamp (upper and lower alternately); (d) two top lamps and two side lamps. The top lamps were about six feet, two inches from the floor.

We have tested out the effectiveness of the ultraviolet lights by Wells' method, when the air-changing system is not used and when the air is changed 4, 6, and 10 times an hour. Wells[8] has applied a formula used by air-conditioning engineers to express his results. By means of this formula the number of air-changes an hour that would be

TABLE 2

EFFECT OF ULTRAVIOLET LIGHT CURTAIN, WITH NO AIR-CHANGING*

Time after spraying** started (min.)		2	4	8	16	32	64
Number of Lamps		*Bacteria per cubic foot of air—Samples taken in Cubicle* 1					
Two top lamps and 2 at each side	Exp. 1 .....No lamps; no air-changing.....	470	315	100	22	11	2
	Exp. 2 .....Ultraviolet lamps; no air-changing..	0.6	0.5	0	0	0	0
	Per cent killed.....	99.9	99.9	100	100	100	100

*Two minute sprayings were used in all these experiments.
**Harmless bacteria.

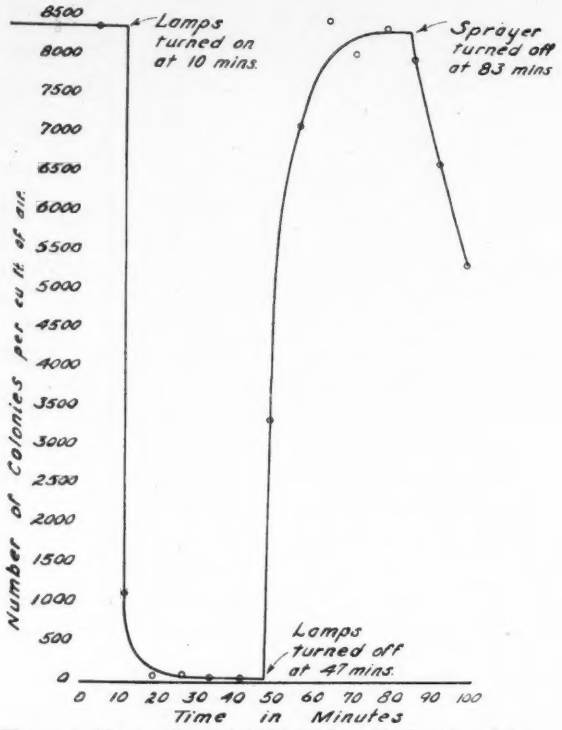


Figure 4—Destruction of air-borne bacteria by ultraviolet lamps. Bacteria were being sprayed into the air at a constant rate for the first eighty-three minutes of the test.

needed to produce the same reduction in the number of air bacteria as that produced by the ultraviolet lamps can be calculated. It varied in these tests from 1000 to an infinite number of air changes per hour. When the air-conditioner was set for ten changes an hour, the effectiveness of the lamps was not reduced.

TABLE 3

BACTERICIDAL EFFECT OF LAMPS IN THE DUCTS

Air flow		*Bacteria per cubic foot of air*	
		Test 1	*Test* 2
200 linear feet per minute	Number of Ultraviolet Lamps used	1	1
	Before passing lamps	12,300	849
	After passing lamps	88	25
	Per cent killing	99.3	97.1
		Test 3	*Test* 4
450 linear feet per minute	Number of Ultraviolet Lamps used	4	4
	Before passing lamps	26,130	225
	After passing lamps	42	7
	Per cent killing	99.8	96.9

TABLE 4

WELL'S METHOD—NO AIR-CHANGING

	Time of beginning of samples	*Bacteria per cubic foot air. Samples taken in Cubicle* 1
No Lamps	0	8,390*
Lamps on (10 min.)	11 min.	1,154
	18	94
	26	101
	33	60
	41	61
Lamps off (47 min.)	48	3,872
	55	7,165
	62	8,530
	69	8,095
	77	8,440
Sprayer off (83 min.)	84	8,060
	91	6,710
	98	5,395

*Equilibrium reached after 23 minutes.

After our preliminary tests are completed, infants will be nursed in this ward and we plan to follow them as completely as possible, especially from the bacteriological point of view. It will be some years before the results are available, but we hope by these methods to much reduce the incidence of hospital cross infections.

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An Experiment in Collections

GERALD F. HOUSER, M.D.

WHEN the idea for the procedure described here first reached the level of the writer's consciousness, it must be admitted that it seemed solely a plan for improving or adding to the many measures for the collection of unpaid accounts. Whether or not the thoughts that appeared later are manifestations of impressions heretofore subliminal or are merely subsequent rationalizations must be left unanswered. The facts may be important; the theorizations are of less consequence.

After seemingly every effort is made at our hospital to collect those accounts where there appears to be some hope of success and where indications are that they could be paid, the final act is to stamp them with a red-inked impression "Send no more bills." Even after this concluding performance, conscientious individuals sometimes make payment and the accounts are reopened.

These belated payments were taken as evidence that the feeling of obligation to the hospital did exist in the minds of some, and the urge to do something about awakening and stimulating into action this same emotion in others grew rapidly.

Selecting the Accounts

Accordingly, old accounts with unpaid balances of $50.00 or more were scrutinized carefully and finally about two hundred were selected as worthy of concentrated effort at collection. These were arbitrarily chosen from a five-year old list and totaled over $17,000. The history of the unsuccessful attempts to settle the bill as recorded on the reverse side of the account cards was a sad story with an unhappy ending; unhappy both in the tragic tales of the debtor's financial difficulties and the absence of ability or intention to pay. As a whole the general inference could be drawn that payment was not made because there was no money with which to pay. After five years we could at least hope that circumstances had changed for the better, although the financial histories on the account cards gave evidence that there was little reason to be optimistic about these previously uncollectible accounts. However, it did seem reasonable to suppose that the percentage who after the passage of time had improved their economic status would remit sufficient sums to make the experiment worth while and perhaps justify following out the plan on a much wider scale.

The Author

● **Dr. Gerald F. Houser is Assistant Director of the Massachusetts General Hospital, Boston.**

This general letter which covered almost all cases was composed and typewritten (not mimeographed):

Dear ———:

Please read this letter carefully.

We do not know if there has been any change in your circumstances since (you or patient's name) was (were) a patient at the Massachusetts General Hospital, but in the hope that there has, we are asking you to make an effort at payment of the unpaid balance on (your, his, or her) hospital bill. This amounts to $00.00.

It has been our experience that the majority of people pay what they can and we feel duty bound, after reviewing old accounts, to send out reminders of this sort to individuals who probably have the very best of intentions but have not considered hospital bills in their plans to pay up old debts.

May we hear from you soon? A stamped envelope is enclosed and your reply may be made on the reverse side of this sheet.

We are anxious that you appreciate our reasons for writing you at this late date and any payments that you make should be based upon your ability to pay plus a feeling that you still have an obligation to the hospital.

Very truly yours,

Director.

Two other letters, also typewritten, applying a little more directly to the account in question were sent out and are recorded below:

Dear ———:

Please read this letter carefully.

We have been reviewing many old unpaid accounts and are struck by the number of individuals who promise faithfully to make payment and never do.

Our faith in people is not lessened by this, however, because we feel that a large percentage do not pay because they cannot. The intention to pay is something, and we think this applies to the account of .....

If your circumstances have changed, we would like to hear from you soon. Will you reply on the reverse side of this sheet concerning any plans you may be able to make for payment of this balance which amounts to $00.00. A stamped addressed envelope is enclosed for your convenience.

We are anxious that you appreciate our reasons for writing you at this late date and any payments that you make should be based upon your ability to pay plus a feeling that you still have an obligation to the hospital.

Very truly yours,

Director.

And:

Dear ———:

Please read this letter carefully.

In reviewing old accounts we find that we have written repeatedly for payment to some of our patients or their relatives and have not even received replies, let alone any form of settlement. Whatever may have been the reason for this lack of response, the reason for non-payment must be due in almost all instances to poor economic conditions. The account of..... ..... may fall in this group and we are writing in the hope that your circumstances may have changed and that you are now able to pay all or at least part of the balance due. This amounts to $00.00.

A stamped envelope is enclosed herewith. Will you reply on the reverse side of this sheet and let us know what payments you think you will be able to make?

We are anxious that you appreciate our reasons for writing you at this late date and any payments that you make should be based upon your ability to pay plus a feeling that you still have an obligation to the hospital.

Very truly yours,

Director.

At the time of this writing a month has elapsed since the last letter was mailed. It may be too early to expect results but at least there is reason to believe that we may be entitled to a few conclusions now, and our opinions should be given as much weight as the various polls that forecast the country's political future.

Results of Our Efforts

At any rate, of the two hundred and twelve letters sent we have received just thirteen replies, a significant number perhaps. Eighteen have been returned unclaimed, and of the thirteen replies only one definitely promised to make payments eventually. Time will tell whether or not this one ray of light will flicker out, and the impression gained from the experiment as a whole keeps us from making any predictions about what the other twelve will do.

While it was known that the accounts were *bad,* the almost absolute lack of response reveals that they were *very bad,* and that five or so years ago we had in reality done all that was possible in the way of effort at collection. It was at least gratifying to read in all answers that the patients were very conscious of their obligation to the hospital as was suggested they should be. The other one hundred and ninety-nine may have felt this obligation but they took no action to demonstrate it.

As we inferred, the bills were not paid in the first place because of lack of funds and we may infer again that a period of five years had brought about no improvement in conditions. The absence of replies provides interesting material for speculation. Can we say that it also means a lack of sense of responsibility?

The letters sent were not critical and care was taken not to arouse any antagonism. They might even be described as mild. Perhaps they were not forceful enough; but it must be remembered that these were accounts that had been closed, and that many of the patients to whom we wrote must have been aware of the fact. The sole justification for reopening the majority of these accounts was the appeal to any sense of obligation the patient might have and a certain amount of delicacy of necessity had to be employed.

Fortunes, if they have changed, have not changed materially for the better in the last decade and this observation is given weight by our own experiment if it may be looked upon as any criterion.

Well-meaning people do let bills slide and they must have their memories stimulated. Strongly worded letters and collectors' services must be brought to bear on others before any real impression is made. Developments herein described present possible evidence that such measures had already served their purpose. However we may conjecture, we think we have learned that efforts at collection must be carried out in a continuous performance from the time of hospitalization, mark bills off when payment seems impossible and make no further moves unless the account is voluntarily reopened.

The writer has satisfied himself for the present that our collection methods are fairly thorough. Perhaps the experiment tried here with some modifications will appeal to others who may have better material success. A check of this sort on old accounts may be desired from time to time, but certainly no great expenditure of time and energy is warranted merely as an inventory of faithful collection procedures.

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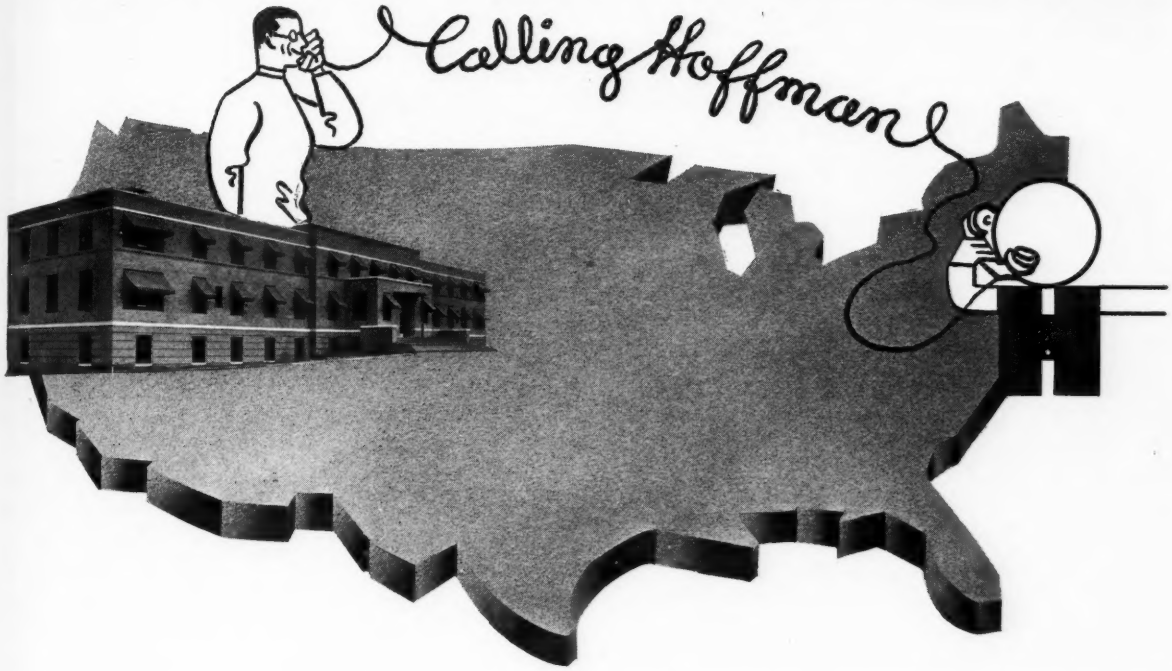

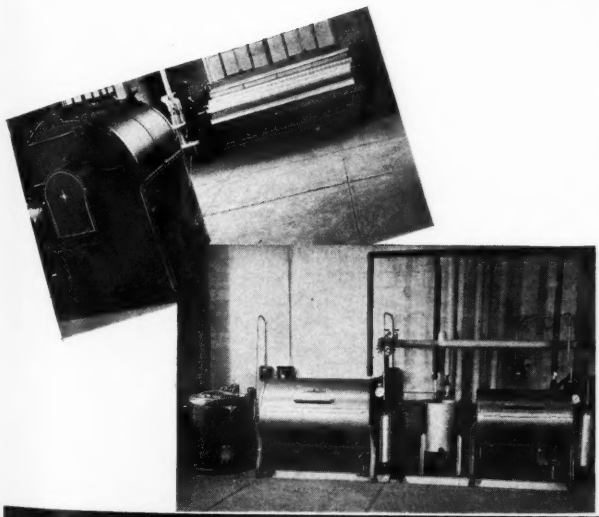

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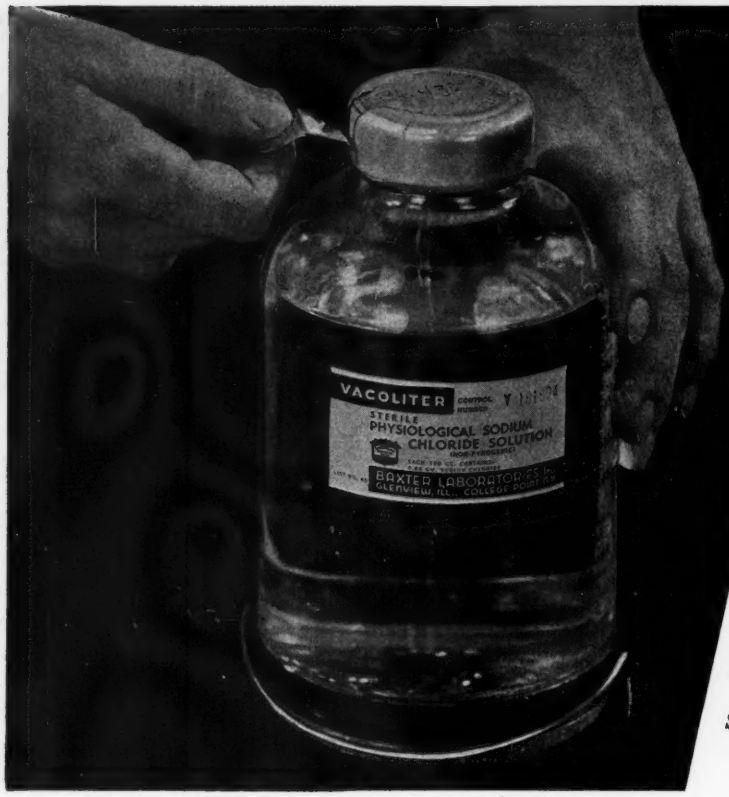

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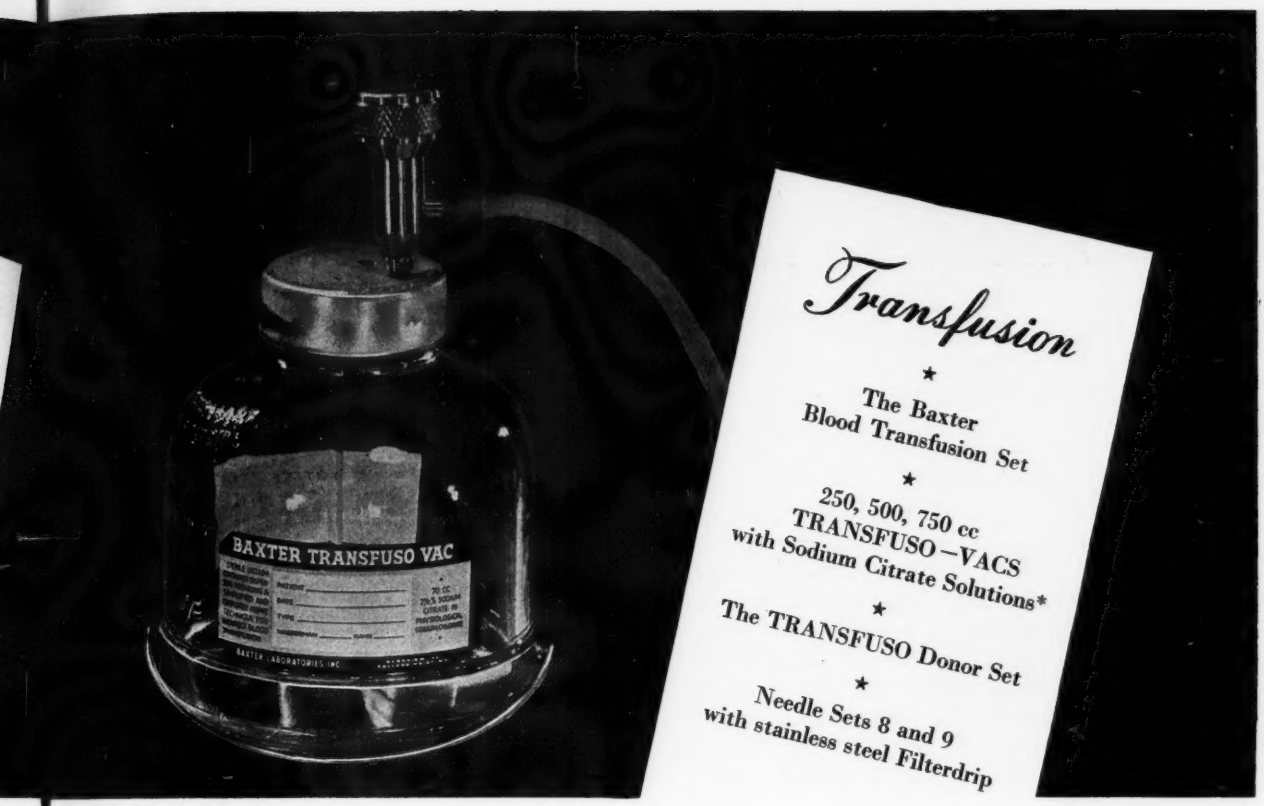

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Making the Patients Feel at Home

FRANCES L. MEADOWS

THE patient entering the hospital usually has many things on his mind, unless he is too ill to think at all. In many cases the operation comes as a shock, the family exchequer is empty, and its credit mythical. The patient naturally fears the results of the operation. The nurse, through her tactful, understanding, and calm manner, may cause much of this unreasoning fear to vanish. By simple, clear cut explanations of the routine or unusual interviews and examinations the patient will have, she can help him to see that the latest and best service and equipment of the hospital will be used to facilitate his recovery, and by her cheerful confident attitude strengthen his faith in the surgeon who is to perform the operation. She must do this, however, without too much talking—what Florence Nightingale refers to as "chattering hopes."

Since the hospital is "a home for the care of the sick," the patient should be made to feel at home by the way he is greeted. In the busy life of the hospital there are so many duties to claim the attention, the time is so filled up, and there are so many interruptions that it is easy to allow greeting the patient to become mechanical and standardized. The patient should be greeted cordially and made to feel that he is welcome at the institution, and that the individual nurses as well as the hospital personnel as a whole are interested in and hopeful for his recovery. After all the necessary routine business connected with admission has been taken care of at the business office, the patient should be taken to his room as soon as possible. Quiet must be maintained in the room and in the adjoining halls. All the regular routine matters of procedure should be carried out but without sacrificing the comfort or disturbing the feelings of the patient.

The nurse or supervisor should introduce herself by name and should be able to call the patient and the accompanying members of his family by name. Immediately after the patient is admitted to his room, the nurse should see that the nurses, orderlies, and all who are to come in contact with the patient are informed of the name of the patient so that they can call him by name on entering the room. It makes the patient feel that he is an individual and that he has an important place in the scheme of things in the hospital.

The Author

● **Frances L. Meadows is the Nurse Director at the Lewis-Gale Hospital, Roanoke, Virginia.**

Courtesy to the Relatives

If the relatives of the patient are of the overanxious type, they will have a depressing effect on him. Often a word of assurance during the examination and operation, or thoughtfulness for their comfort, such as comfortable chairs in the reception room with ash trays, magazines, and a telephone near at hand, will do much to relieve their minds, which in turn will have an effect on the patient.

The Patient's Reaction to the Nurse

Much of the patient's comfort and recuperation will depend on his reaction to the nurse with whom he comes in contact. The nurse should be professional and should, by her manner, assure the patient that she knows what she is about. The patient must be made to feel that he can look upon the nurse as a friend who can be trusted implicitly. The nurse should always remember that she stands in the doctor's place during his absence. Her attitude reflects favorably or unfavorably upon the whole hospital.

Patients often take unreasonable likes and dislikes to those with whom they come in contact. The nurse should remember that much of her success depends on the opinion a patient forms of her at the initial meeting. First impressions are said to be lasting, and everyone will agree that they are extremely important. The nurse must be keenly observant of her patient's moods and must employ all the tact, diplomacy, and consideration that she possesses. The patient should be made to feel that he is in competent hands, and that he will receive sympathetic as well as efficient care.

Planning Your X-Ray Therapy Department

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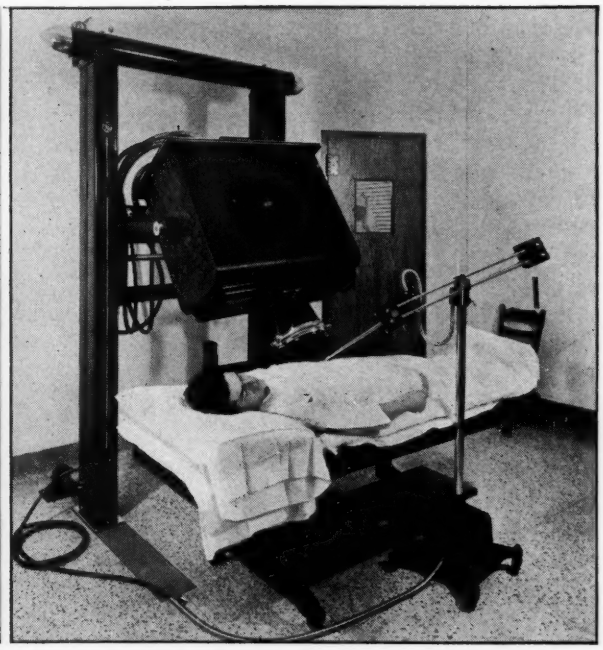

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The nurse should have an immaculate appearance and she should practice the strictest personal hygiene. She should radiate health and cheer. Her naturalness of manner should cause the patient to feel he is among friends. She should be unhurried in her actions and never permit a feeling of restlessness and irritability in the sick room. Her own personal feelings, her knowledge of the patient's progress, or her own reaction to the patient's temperament, may warrant the opposite of a smile, but it should never be in evidence when she greets her patient.

The Nurse's Interest in the Patient

The nurse should show a real interest in the patient. She should listen with interest to what he has to say—even though she may prefer the company of her own thoughts. She should be friendly, understanding and polite to visitors. She should see that gifts and flowers are properly cared for and that a note is made of the names of the persons who sent them and what they sent.

Every attempt must be made to combat fear, uncertainty, worry, and lonesomeness on the part of the patient. In times of stress, few people think logically. In the presence of severe illness, a possible operation, and the fear of not recovering, a person may experience a psychic shock and it is difficult for him to control his emotional reactions. The nurse should understand such situations and be able to aid the patient to overcome fear and to adjust his thinking along constructive lines. It is the business of the nurse through the proper understanding of suggestion and the power of mind over body, through her personality, and her cultured attitude to inspire hope and faith in the mind of her patient, and to strengthen the will to get well. She must not permit herself to be influenced by emotions manifested about her but must be able to maintain a proper balance between a hard boiled indifference and a mawkish emotionalism.

Frequent visits to the room should be made by the nurse to observe the condition of the patient, and to see if she can be of service in any way. All services needed should be rendered efficiently, capably, and cheerfully. The patient has the right to expect as much comfort as his condition will permit him to enjoy, and he expects the nurse to find the means of making his lot more endurable. The nurse should be prompt in answering calls, should be firm when necessary, but should always be kind, sympathetic, and understanding. A little encouragement, a kind word, and a few of the little niceties of life bring rewards and make lasting friends not only for the individual nurse but for her hospital.

Supervision is a vital part of efficient service and this should not be limited to staff nurses, but should include special nurses as well. The quality of bedside care is what sells the hospital to the public. Any fault in the care given by a special nurse is more likely to react on the hospital rather than on the special nurse herself.

The Patient in the Scheme of the Hospital Public Relations

Unless we take the time to tell and to show the public how can it know that in our complex civilization few of our endeavors require as elaborate and complicated system of many activities as the modern hospital? We, on the inside, know that the care of any patient is a very complex matter but most of it is invisible and incomprehensible to the patient and his friends. They see the room with the four or five pieces of furniture, the tray with its inevitable broth, and often their minds go to some nice hotel whose appointments, food, and their own ability to enjoy it make the experience enjoyable. They compare that price with the staggering bill which the hospital is forced to present. To effectively care for so many efficiently, economically, and pleasingly, means that all persons connected with the hospital must cooperate, must have a working knowledge of the elementary principles of psychology, must have a knowledge of the best methods of hospital procedure, and must have a genuine love for humanity and a desire to serve it.

Meeting of Special Libraries Association

The Thirty-second annual convention of the Special Libraries Association will be held in Indianapolis, Indiana, June 3-6, with headquarters at the Claypool Hotel. Mrs. Irene M. Strieby, Librarian of the Lilly Research Laboratories, Indianapolis, is the National Convention chairman.

The Special Libraries Association is a national organization whose membership is drawn from institutions or firms maintaining special libraries or research departments, such as business branches and specialized departments of public and university libraries, museums, hospitals, and from other fields of business, sciences, technology, social welfare and the arts. Membership in the organization now totals approximately 2200.

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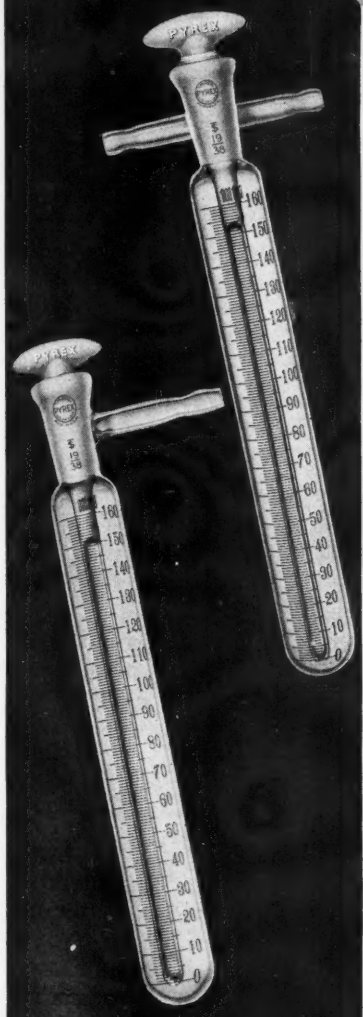

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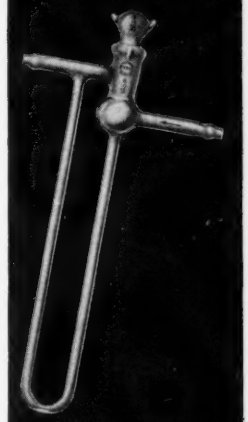

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Problems Involved in Hospital Linen Service

AUSTIN CROWLEY

OF the innumerable problems that confront the hospital executive today, none has come to the fore as strongly in recent years as has the problem of the linen service in the hospital. The reasons for this are many and varied, but chiefly it is because we realize today, more than ever before, that in every hospital department there must be the greatest economy and efficiency practiced if the hospital is to do its best for the community it serves. The last ten years have taught us the lesson that we can not afford to overlook any item of expense, no matter how small that item might be.

Upon analysis we find that the furnishing of linens to a hospital, and maintaining those linens in circulation, may require more than *five per cent* of the institution's annual operating budget, to say nothing of the original capital investment involved. And the linen service cost per patient per day for the linen used in the direct care of a patient is, in the majority of cases, greater than the cost of all the miscellaneous supplies, including drugs, sterile supplies, and solutions, used by that patient. Therefore, from a financial point of view we find in our linen service no insignificant problem. Then there is the question of efficiency which, aside from its bearing on cost, is extremely important, since upon the linen service depends so much that is necessary to the proper care of the patient. The patient must have a clean bed and clean linens for his treatments and operations. The doctor and the nurse must have their clean uniforms and other apparel worn in the pursuit of their professional duties. Yes, linens are important and necessary everywhere in the hospital, and they must be ready at hand, clean, and in sufficient quantity to care for even the greatest emergency. And so, from these two viewpoints alone, cost and efficiency, it is brought home to us that the linen service of any institution is a problem worthy of our consideration.

Factors Involved in the Hospital Linen Service

Before proceeding to discuss this problem, let us first look at the factors involved in the order of their relative importance. These factors are mainly three: first, the quantity of linen in circulation; second, the method of its distribution; and third, the laundry. These three are welded together to form what may be called the hospital linen service. If any one of these three is at fault, then the linen service may be unsatisfactory, expensive, and perhaps even dangerous to the welfare of the patient. If the linen supply is insufficient, neither the method of distribution nor the overworked laundry can maintain economical and efficient service; if the method of distribution is faulty a normal quantity of linens will never be adequate, nor will an efficient laundry be able to supply the unreasonable demands created. From this it is evident that the three factors are dependent upon each other to such an extent that while each may present problems to be worked out separately, together they constitute the one problem of the hospital linen service.

The Author

● **Austin Crowley is the Director of Linens and Laundering in the Columbia-Presbyterian Medical Center, New York City.**

Ascertaining the Amount of Linen Needed in Circulation

The quantity of each of the various items of linen used by the hospital that should be in circulation is the first and most important factor to be considered and the starting point for the solution of our problem. How can we definitely ascertain the amount of linen we need in circulation? The answer is comparatively simple if we consider in a broad sense the analogy of the home. Let us look in on the newly-wed couple starting in housekeeping. They need sheets, pillow cases, spreads, and many other items of linen. How many do they need? They need enough to make up their beds first of all, then they must change them on a predetermined schedule, then the laundry will have to have time to clean up their soiled linens, so they must have clean linen to use while that takes place. In such a manner do they estimate their

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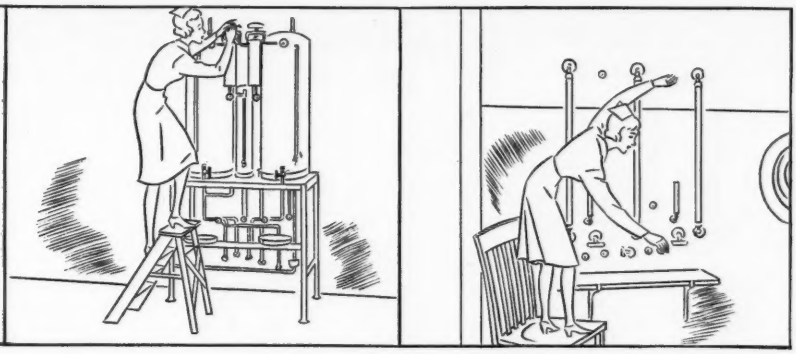

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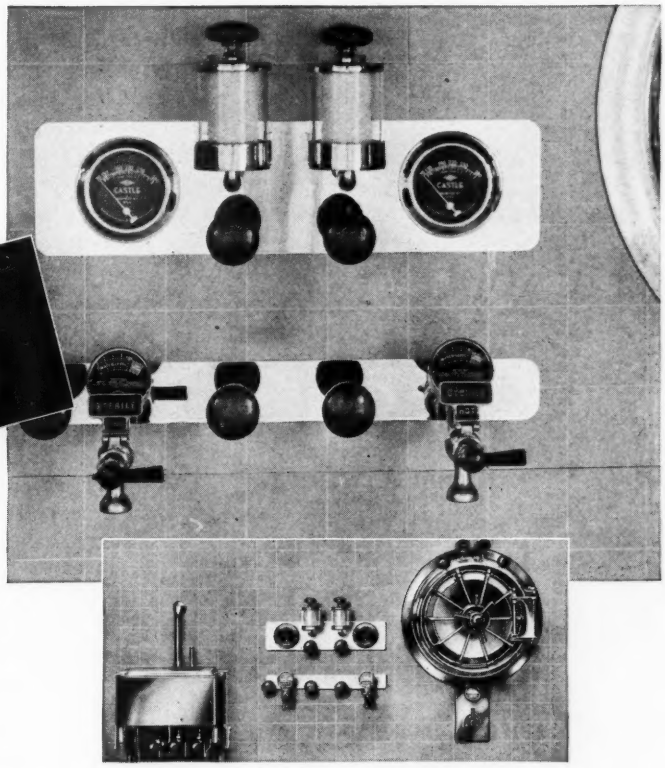

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linen requirements. And from them the hospital might well learn a lesson, for the first consideration should be how many of each item are in actual use at a time; second, what is the rate of change prescribed; and third, how much time does the laundry require to process the item. Knowledge of these three basic facts should give a groundwork for estimating the quantity of an item needed in circulation.

But in building the hospital requirement we must take into consideration those factors in which a hospital differs from the home. There is no need in the home for sterilization of linen, but the hospital, in determining the amount of any item in actual use, must consider the quantity, if it be a sterile item done up in sterile packages, as being in actual use. The rate of change prescribed by nursing technique must be broadened to include the factor of accidental soiling so frequent in a hospital among certain items. The third factor, that of the time necessary for the laundry to process the item, must also include the consideration of the hospital supply over the period of time when the laundry is not in operation. As a general rule, hospital laundries function but a half day on Saturday and not at all on Sunday. Certain holidays, such as Labor Day, fall on Monday, and at such a time there must be enough linens in circulation adequately to carry the institution from Saturday noon to Tuesday morning—almost three days. From this it should be apparent that the quantity of every item should, for safety and efficiency, include the amount in actual use, plus a three days' supply figured at the average rate of use per day.

In the past there has been a method of estimating the necessary linen supply that was based on the "amount per bed" idea. This method is still in use, but its value is questionable, due to the fact that it is usually applied equally to all types of hospitals, when we know from experience that while eight sheets per bed may be sufficient for a hospital devoted only to medical care they would hardly take care of an institution devoted to surgery or obstetrics. In this case, while the actual quantity in use at one time and the prescribed rate of change might be the same, there would be enough variation in the rate of use per patient per day to render the estimate valueless, and the end result would be a too rapid turnover of linen, a laundry under pressure, and a hospital short of sheets. It is also important that in setting up a quantity of each item we know exactly the movement of that item, and the length of time it spends in any one location.

Another point concerning the circulating linen supply I cannot stress too strongly, concerns the maintaining of that supply at a fixed strength. We often find in hospitals that there is a general disregard of the all important replacement functions to the point where replacements are made only when the shoe pinches and then in determinate quantities. If a proper linen set-up be arrived at for the hospital, and replacements are not made piece for piece as the items are removed from circulation, there can be no doubt of the failure of the supply. Inventories should be taken at least twice a year to replace the items going out of circulation, either through stealing or destruction.

Method of Linen Distribution

The second major part of our problem concerns the method of distribution, which presents almost as many possibilities of solution as there are hospitals. The end we are striving to arrive at, however, is the placing of necessary articles of linen at the points they are needed in such a manner and in such quantities as may be necessary. The actual delivery of linens presents no problem at all since it is usually done in trucks or hampers except where physical conditions prevent such a method being employed. But the maintaining of a sufficient supply in the department soiling the linens is a problem second only to the problem of the necessary quantities in circulation, because on the method may depend to some extent how much linen is needed, and on both depends the efficiency of the linen service. But to attempt to delineate any one method as being the best for all hospitals to adopt, would be foolhardy. While certain systems might be laid out for hospitals of similar bed capacities, I have no doubt that they would not be entirely satisfactory as a whole, due to those differences ranging from physical layout to hospital policy that render all hospitals individuals.

Requisition system—The method most in use in hospitals today is, of course, the requisition system. It is that system of distribution whereby some person in every branch of the institution makes out a requisition on the main linen room for enough of each item to carry that ward, floor, or department, as the case might be, over the period of time until the next requisition is made out. Of course in order to do this intelligently that person must, each time a requisition is made out, know how much of each item is on hand in the department and how much will be required until the next delivery can be made. In some cases, when carefully carried out, this system may be satisfactory, but I am afraid that in the majority of cases it is not satisfactory due to the fact that

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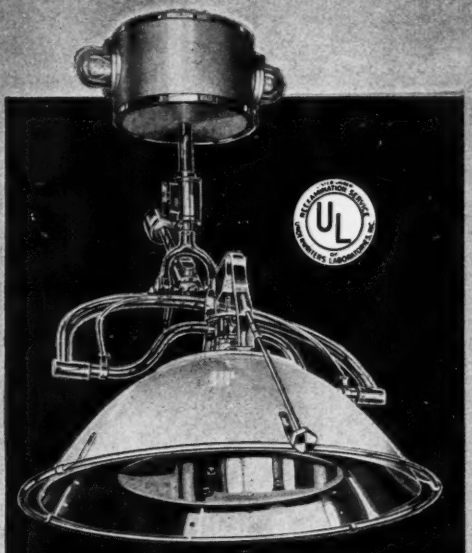

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the person making out the requisition will, due to the pressure of other duties, guess at the two important factors of the supply on hand and the supply needed. As a result of this guess, the department is either under-stocked or over-stocked and with a fixed supply available for the entire hospital, an over-supply in one department means not enough linens in another. The over-supplied department is tying up the stock needlessly, while the under-supplied department is exerting pressure on the laundry to produce more than it should—all this resulting from a bad guess on somebody's part. The solution usually attempted, when this happens, is to have somebody along the line "correct" or "edit" all requisitions before they are filled, but in most cases that "editing" it done by someone too far away from the requisitioning department to know accurately whether the amounts requested are too large or too small, and the result is another guess added to the original one. Many hospitals use this method, however, because they have the feeling that it is an inexpensive system to operate, but I am sure that if all the costs were taken into consideration, including, of course, the cost of the people's time all along the line, starting with the person who makes out the requisition, that the economic efficiency of this system would not be very high. And if the system were perfectly carried out, with each day the requisitioning person inventorying the supply on hand, and accurately forecasting the supply needed, the economic efficiency would be still lower, although the system itself might function well.

Full identification system—Another method of linen distribution that is in general use is the method of full identification. This system calls for the marking of a supply of linens for each ward, floor, or department, to be used by them exclusively. Considered theoretically this system has much in its favor, but, where it is used, there must be three factors perfectly worked out. First, the necessary amount of each item to mark for a department must be accurately determined or else the situation will arise of one department needing to use linens marked for another. Second, the discarding of worn out linens must be recorded accurately and replacements made immediately in order that shortages may not cripple the service. Inventories also will have to be taken at shorter intervals in order to replace losses before they can cause serious trouble. In fact the maintenance of the supply, using this method of distribution, demands the storing of an adequate supply of new items to be marked as old items are discarded. The third factor involved in this system is that the sorting of clean linens coming from the laundry will require considerable space and greater effort since they must be broken down not only as to type but in addition they must be segregated as to place of use. In other words, not only will the linens be separated into sheets, pillow cases, hand towels, bath towels, etc., but the sheets themselves will have to be sorted as to the department they belong to, as will every item in use. With these three factors worked out, however, this method of distribution might well be used in certain hospitals, but it will require more linen in circulation per bed, due to the fact that the supply is not flexible and is limited as to its place of use.

Daily issuance system—There is a method of distribution in use in some hospitals that is based on the daily issuance to each department of the institution, of a fixed amount of linens to carry it over a definite period of time. This system, however, cannot possibly work out satisfactorily, unless a great deal of incidental work is done. In the first place the quantity issued would have to take care of full occupancy unless the daily delivery to each department be corrected to coincide with the daily census. Even in that case enough extra linens would have to be furnished to cover all emergencies. Any linens unused would have to be either taken back or subtracted from the next daily delivery, if the situation of an over-supply here and there throughout the institution, with its consequent shortage in other departments, is to be avoided. I feel very strongly that there is no one anywhere in or out of the hospital world who is so clairvoyant as to be able to tell in advance with accuracy what linens any hospital department will need to use in any future period of time. Therefore, if this system be used, and I do not doubt that there are places where it could be used, it must be so surrounded with safeguards that it permits of no shortages or extravagances.

Linen control system—There are many other methods of distribution too numerous to mention, some of which are basically related to the first three, but changed to fit some circumstance appearing in the individual institution. I shall speak of one more method, not because it would necessarily be applicable to many hospitals but because it was conceived to fill the needs of a large institution, and therefore must contain all the essential virtues of any system, and must eliminate to a great degree the vices of any system, since in a large institution those same vices which might be annoying in a small hospital would be disastrous for a large one. The method of distribution I refer to is known as the linen control system. It is based

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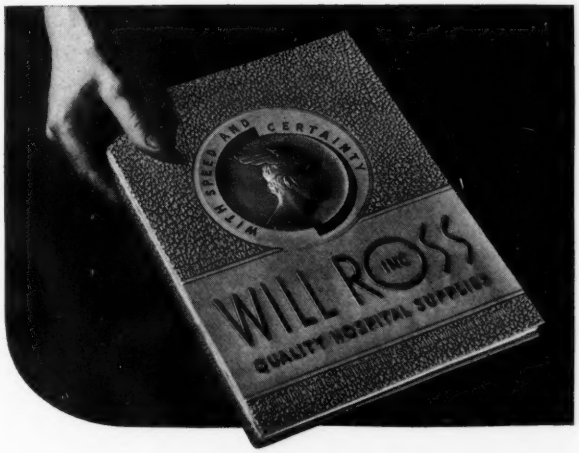

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on the idea that the hospital laundry and the commercial laundry are primarily the same, that the hospital linen room is analogous to the laundry delivery room, and the individual hospital departments coincide with the laundry's individual customers. Where this system is used each department must be equipped with a definite quantity of each item it uses, as in the full identification system, the difference being that these linens are not marked for the department, but can be used anywhere. When they become soiled in use they go to the laundry in marked bags and are counted and listed for the purpose of returning to the using department, piece for piece, clean linens for soiled. In the beginning this system may seem the most expensive to use, but it enables the hospital to record and check the use of linens by departments, it removes from the department any necessity of requisitioning supplies, or day by day inventory, with the consequent saving in time and effort everywhere outside of the linen control department. The placing of the supply in each using department instead of in the main hospital linen room keeps the linens where they are to be used and in such quantities as to safely cover any emergency twenty-four hours a day. The chief value of this system, however, lies in the fact that through the recording of the transactions the hospital can draw accurate figures on which to base and control the quantities to be kept in circulation, the use of the linens per patient per day, the cost of replacements, and any number of related statistics depending on the policy of the institution and how deeply it wishes to go into its linen problem.

The Part the Laundry Plays

The third major part in the problem of furnishing the hospital its linen service, involves the laundry itself. This department is the means of returning to usefulness those linens rendered useless by soiling, and as such takes an important part in the linen service cycle. The laundry is required to do mainly two things: first, it must do a satisfactory job of washing and finishing linens for hospital use, and second, it must produce clean linen when and as wanted.

In the first case, the end result rests squarely on the shoulders of the person directly in charge of the laundry operation. There is no reason why with the many helpful services furnished gratis by supply companies and laundry associations, the laundry service should not be first class. Modern chemistry has done its best and is still seeking out new ways of washing that will clean perfectly with the least possible harm to the fabrics treated. It is therefore important to the institution that its laundry manager keep always abreast of new developments in the industry—accepting and adopting those tried and found valuable, but rejecting those untried. For if there is one thing no hospital can afford it is careless experimenting with its linen supply. In the finishing of linens for hospital use there should always be an awareness of the variation in cost between the various types of finishing in order that expenses be held to a minimum.

The second part of the laundry's job, that of producing clean linen when and as wanted, presents a difficult problem. In this case the question of equipment assumes a great importance. We find so many institutions today holding on to old inadequate equipment and expecting their laundry to do good work. They forget that the cost of operating old machinery is often greater, when repairs and other expenses are considered, than the cost of new equipment. Certain types of old machines do a poor job at best, consume more supplies, and take longer to do their work than certain new machines on the market today. It is therefore important that the laundry be checked periodically as to the advisability of replacing the various mechanical units that do the work. At such a time it should also be kept in mind that a laundry that is always late in producing may be so because it may be under-equipped and its capacity may not equal the work it is called upon to turn out. I have found in the past there has been a general misconception among those building hospitals that the laundry should be set up to take care of an average of somewhere around ten pounds per bed per day, when the truth of the matter is that depending of course on the type of hospital, this poundage may run as high as eighteen. As a result not only is the laundry retarded in producing clean linen but often it has to resort to dangerous short cuts in order to get it out at all. In addition in many cases it has absolutely no reserve capacity to call on in case of a possible breakdown, and when this happens, even a normally adequate linen supply is unable to cope with the situation. Another important point that should not be overlooked is the maintenance of the equipment, which should be frequently checked for wear in order that repairs be made at a time when it is not in use. It should be kept clean, free from lint, and well oiled if it is to give the utmost in service.

At the beginning of this discussion I spoke of the three parts of the linen service problem, but there is a point affecting all three parts that I shall illustrate by an actual happening in a certain hospital. This institution had a fairly good laundry supervised by a superintendent whose sole

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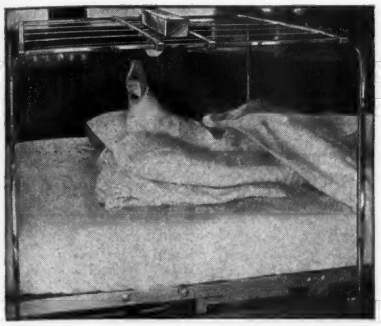

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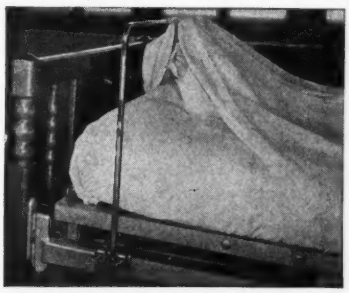

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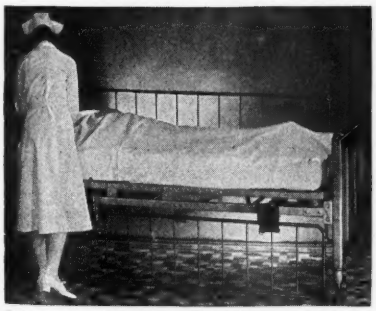

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responsibility was the production of laundry work. As he finished his work he turned it over to the hospital linen room, supervised by a manager, whose duty it was to handle the distribution of the clean linens to the various departments. They, however, never seemed satisfied with the quantities he gave them. So one day a certain head nurse took her complaint to the hospital superintendent, who at once summoned the linen room manager. Upon questioning, the manager said that the reason he could not send enough linens to the various departments was because the laundry was not producing enough. So the hospital superintendent sent for the laundry superintendent, and asked him why he was not turning out his work. The answer came back that he was not getting from the departments enough soiled linen to wash and he could not produce any more than he got. Whereupon the head nurse broke in to say that that was probably true, since she could send very little soiled linen to the laundry because she had no clean linen to use.

From this happening it should be apparent that if the linen service problem is to be solved the entire service must be operated by one person. Dividing a responsibility, the phases of which are so interdependent, is inviting such situations as I have illustrated.

Such, then, is the problem involved to furnish the hospital linen service—a problem, the solution of which has to be worked out in the individual institution. There is no standard quantity of linen that will fit all hospitals satisfactorily; there is no set system of distribution that can be used everywhere with perfect results; there is no laundry that can be equipped on the same basis nor produce work at the same rate nor at the same cost per pound as another. So in viewing our problem let us face only facts based on adequate experience, solving each factor with an eye to its effect on the other two. When our solution is arrived at may we have the best possible solution for the institution we serve.

Cheaper Chest Films

The importance of the x-ray in the diagnosis of tuberculosis has led to a desire to make chest plates as a routine, both in individual physical examinations and in mass examination of large groups, such as school children. There has even been advocated the importance of making a chest film of every patient admitted to the hospital as a routine, quite as the routine urine examination is universal in well-run hospitals. The expense of the standard 14x17 chest film has been a deterrent.

Many efforts to reduce the cost of making a chest film have been made. Eight or nine years ago the use of paper films was tried. It reduced the cost, but the difficulty in reading did not permit as high a degree of accuracy as was desired.

Another method more recently adopted was to mount a camera, ready-focussed, on an arm leading out from the fluoroscope stand in order that the fluoroscopist could snap the image at any time he discovered an area of interest. The camera used for this purpose was usually of the miniature type, and even with the use of fine grain film and developer, the subsequent enlargement lost too much in contrast and detail to be entirely satisfactory from a diagnostic standpoint even though the economy was very great, and the general "batting average" was high for the reason that the fluoroscopist could take all the time needed to study the film. The importance of the leisurely study of the film is illustrated by the observation that examination of the chest by direct fluoroscopy failed to find the lesion in thirteen per cent of cases, which showed "positive" on a 14x17 film.

The latest development in this field is a combined fluoroscope and camera recently announced by the General Electric X-Ray Corporation and installed in the Herman Kiefer Hospital in Detroit. This equipment is so designed that by use of a lens the fluoroscopic image is reduced to the size of a 4x5 film and activation of the fluoroscopic screen automatically exposes the film.

In this manner the fluoroscopist has at his disposal a film large enough to preserve detail and depth and the advantage of a permanent record which he can study as long and as carefully as desired.

In actual use it has been found that this method missed but two and one-half per cent of the lesions which were shown on a 14x17 film, and the cost for the 4x5 film and processing materials is but ten cents, as compared to ninety cents for the conventional 14x17 film.

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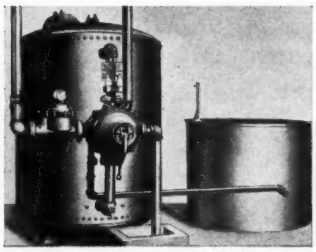

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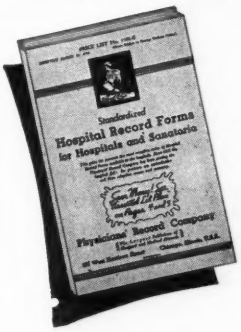

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I 3-40

News of Interest to the Hospital Field

Marian Batdorf has assumed her duties as superintendent of the Edgerton Memorial Hospital, Edgerton, Wisconsin, succeeding **Laura Wold,** who resigned several months ago.

Dr. R. S. Bookhammer has accepted the position as medical director of the State Hospital in Norristown, Pennsylvania.

Stella Bowline, R.N., has accepted the position of administrator of the Cullman Hospital, Cullman, Alabama, which has been opened recently.

William S. Brines has been appointed assistant superintendent of the House of Mercy Hospital, Pittsfield, Massachusetts.

Mrs. Marion W. Brooks has resigned as superintendent of Cimarron Valley Wesley Hospital, Guthrie, Oklahoma, and **Lang B. Davis** has been appointed as her successor.

Leila Cordrey, formerly superintendent of nurses at Jennings Hospital, Detroit, Michigan, has been appointed superintendent of nurses at Methodist Hospital, Fort Wayne, Indiana, succeeding **Mrs. Mary Freed.**

Dr. Bert Daly has been named medical director of the Hudson County Contagious Disease Hospital, Secaucus, New Jersey.

Dr. Theodore L. Dehne has assumed his duties as superintendent of Friends Hospital, Philadelphia, Pennsylvania, succeeding the late **Dr. Albert C. Buckley.**

David M. Dorin, formerly business manager of the Hawthorne-Cedar Knoll School for Delinquent Children, is now assistant director of the Beth Israel Hospital, New York City.

Dr. M. L. Dryfus has accepted the position as executive director of the Home for Aged and Infirm Hebrews, New York City.

Dr. A. M. Fisher has been appointed superintendent of the State Hospital for Insane at Jamestown, North Dakota, succeeding **Dr. F. C. Lorenzen,** who resigned four months ago.

Mrs. Laura DeEtte Fox has been named assistant superintendent of nurses and assistant director of the School of Nursing at St. Helena Sanitarium and Hospital, Sanitarium, California.

Boyce R. Gantt has replaced the late **E. Butler Gunter** as business manager of the Aiken County Hospital, Aiken, South Carolina.

W. R. Hainsworth has succeeded the late **Rudolph Bartol** as superintendent of the Norfolk Municipal Hospital, Norfolk, Virginia.

Lester Hale has been named superintendent of the Rouse Hospital, Youngsville, Pennsylvania, succeeding **Mrs. Walter Ward,** who resigned.

Dr. A. P. Hauss, acting superintendent of the new Silvercrest Tuberculosis Hospital, New Albany, Indiana, has announced that **Dr. J. V. Pace** has been appointed head of that institution. Dr. Pace was formerly superintendent of the Indiana State Sanatorium, Rockville, Indiana.

Evelyn M. Heath, R.N., has resigned as superintendent of Northampton-Accomac Memorial Hospital, Nassawadox, Virginia, to accept the superintendency of the Columbus County Hospital, Whiteville, North Carolina.

Wilda M. Hornberger has assumed her duties as superintendent of the Marietta Hospital, Marietta, Ohio, succeeding **Eloise Grafton,** who resigned. Miss Hornberger was superintendent of the Woman's Hospital, Cleveland, Ohio, for the past seventeen years.

Dr. Kenneth B. Jones has resigned as superintendent of the Eastern Shore State Hospital, Cambridge, Maryland, to accept the superintendency of Springfield State Hospital, Sykesville, Maryland. Dr. Jones replaces **Dr. Ira C. Darling** who resigned to accept the superintendency of the Torrace State Hospital, Torrace, Pennsylvania.

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Jean K. MacFarlane assumed her duties as superintendent of the South County Hospital, Wakefield, Rhode Island, effective February 1. Miss MacFarlane replaces **Maude F. Denico, R.N.,** who resigned last July.

Walter H. Mende has accepted the superintendency of Broad Street Hospital, New York City.

Jacque B. Norman assumed his duties as business manager of the Spartanburg General Hospital, Spartanburg, South Carolina, effective January 1. Mr. Norman fills a position left vacant since July 1, 1938, when James L. Rogers, who was business manager of the hospital for about thirteen years, was appointed superintendent of the hospital to succeed Dr. J. Moss Beeler.

Alex E. Norton, formerly manager of the Homeopathic Hospital, Montreal, Canada, assumed his position as assistant superintendent of the New Rochelle Hospital, New Rochelle, New York, effective January 1.

Dr. Louis W. Parratt is the new superintendent and medical director of the Utah State Tuberculosis Sanatorium, Ogden, Utah, succeeding **Dr. L. F. Seapy,** who resigned.

Mrs. Jean F. Richards has succeeded **Mrs. Helen T. Stabler** as superintendent of the J. C. Blair Memorial Hospital, Huntington, Pennsylvania. Mrs. Richards resigned to accept the superintendency of the Montgomery Hospital, Norristown, Pennsylvania.

Mrs. Estelle M. Riddle has been named superintendent of nurses and director of the School of Nursing at Homer G. Phillips Hospital, St. Louis, Missouri. Mrs. Riddle succeeds **Virginia Harrison,** who resigned to accept the position as director of nurses and nursing service at St. Luke's Hospital, San Francisco, Calofornia.

John Rogerson, Jr., manager of Hartford Hospital, Hartford, Connecticut, has resigned, effective April 1. **W. Enos Cornett,** assistant manager, will succeed Mr. Rogerson.

E. E. Salisbury has been appointed executive director of the Chicago Hospital Council, succeeding **Albert H. Scheidt,** who resigned to become associate director of Michael Reese Hospital, Chicago.

Florence Shuler is superintendent of Page Memorial Hospital, Luray, Virginia. Miss Shuler succeeded **Mrs. E. G. Brunsback, Jr.,** who resigned.

Florence Siewers succeeds the late **Mrs. Vera Brandt** as superintendent of nurses at Bradford Hospital, Bradford, Pennsylvania.

Mary A. Smith, R.N., has resigned as administrator of the North Hudson Hospital, Weehawken, New Jersey, and **Dr. J. L. Evans,** president of the medical staff, has been named as her successor.

Mrs. C. D. Taylor, R.N., has been appointed administrator of Garner Hospital, Anniston, Alabama.

Chicago, Illinois—Contracts have been let and work will start soon on a $100,000 two-story building at 2821 Ellis Avenue, Chicago. It will be known as the Alfred C. Meyer Memorial of the Michael Reese Hospital. It will be built by friends of the late Alfred C. Meyer, former president of the hospital. Schmidt, Garden, and Erikson are the architects.

Stoneham, Massachusetts — The New England Sanitarium and Hospital is undergoing a major repair program this winter. Recently a dumb waiter has been installed serving all five floors of the institution, thus facilitating the task of serving meals to the patients.

An addition to the treatment rooms is being constructed at this time and a Hubbard Tank installed. A new cab for the elevator has just been installed which has noiseless performance and the heating system of the building renovated.

Worcester, Massachusetts—An addition to the out-patient department of City Hospital, Worcester, Massachusetts, will be built this year. The approximate cost is $100,000.

South Haven, Michigan—Plans have been announced for the construction of a new hospital in South Haven, Michigan. The hospital is to have a capacity of forty to sixty beds, and will be financed to a large extent by the W. K. Kellogg Foundation.

CLASSIFIED ADVERTISEMENTS

RATES: Eight cents a word. The minimum advertisement is 25 words at a cost of $2.00, including address or key number of 5 words. All answers to keyed advertisements will be forwarded. Classified advertising copy must be received at the office of *HOSPITALS*, 18 E. Division St., Chicago, Illinois, by the fifteenth of the month preceding issue.

Commercial announcements accepted at the same rate. Remittance must accompany classified advertisements.

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PATHOLOGIST—A.B., M.D., midwestern schools; year's residency in medicine; three years' graduate training in pathology; particularly well-qualified in tissue pathology and tumor work. No. 713.

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ANESTHETIST—Excellent training in anesthesia; for ten years taught anesthesia in school where she was trained; three years, anesthetist, small hospital. No. 715.

DIETITIAN—B.S. degree, state university; years' internship in hospital dietetics, large teaching hospital; three years, assistant dietitian, university hospital; interested in both diet therapy and administrative dietetics. No. 716.

TECHNICIAN—Year's training x-ray department of radiology, university hospital; three years, x-ray technician, small private hospital; capable of working without supervision. No. 717.

PHYSIOTHERAPIST—B.S. degree in physical education and certificate in physiotherapy; three years, physiotherapist in orthopedic clinic; two years, physiotherapist with small private hospital. No. 718.

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ASSISTANT SUPERINTENDENT: Laywoman, age 38 years. Graduate in Home Economics. Experience: 4 years charge of dietary department; 5 years superintendent, 150-bed hospital. Prefers position as assistant in larger hospital.

PRINCIPAL, SCHOOL OF NURSING: Graduate large Michigan hospital. B.S., M.A. degree, Columbia University. Experience: 4 years Educational Director; 3 years Instructor in university school of nursing; Director of Nursing 6 years, 225-bed New York hospital. Registered Michigan, New York. Available for appointment in June.

DIRECTRESS OF NURSES: Graduate Philadelhpia General hospital. 2½ years Columbia University. Registered Pennsylvania, New York. Experience: 7 years Assistant Directress; 6 years Directress of Nurses.

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SUPERVISORS: Obstetrical—N. Y. R. N. $125 and maint. Operating Room—N. Y. R. N. $100 and maint. Nights—N. Y. R. N. $125 and maintenance.

ANESTHETIST: Many good openings in eastern hospitals. $90 to $110 and maintenance.

Newark, New Jersey—Plans have been drawn for a new maternity pavilion and a nurses' home to St. Michael's Hospital, Newark, New Jersey. The estimated cost for both buildings is between $400,000 and $500,000. The maternity pavilion will be a five-story brick fireproof building and have accommodations for one hundred cases. The nurses' home will also be a five-story brick fireproof building and will accommodate one hundred fifty nurses. Ground for the new buildings will be broken about May 1.

Rochester, New York—Officials of the University of Rochester announce that construction on a new wing at the Strong Memorial Hospital, Rochester, New York, will be started in the spring. The new wing will cost approximately $400,000 and will double the institution's present facilities for private patients.

Staten Island, New York—The Seaside Hospital, Staten Island, New York, formerly operated by the St. John's Guild of New York City, will now be operated the year round by the New York Society for the Relief of the Ruptured and Crippled.

White Plains, New York—Plans have been filed and approved for the new $100,000 unit for St. Agnes Hospital, White Plains, New York, and construction will start soon. The new unit will be two stories high, will be of brick and stone construction, and especially arranged for the care of crippled children. The unit was the gift of the Martha K. Hall Foundation of New York.

Durham, North Carolina—A psychiatric unit and an out-patient department will be added to Duke Hospital, Durham, North Carolina, about July 1, and a department of psychiatry and mental hygiene will be established on September 1. Recent grants and gifts make the establishment of the new departments possible.

Philadelphia, Pennsylvania—Plans are now being prepared for a 100-bed hospital for convalescent indigents to be erected in Philadelphia, Pennsylvania. The institution will be known as the Magee Memorial Hospital for Convalescents.

Pulaski, Virginia—Construction has been started on the $35,000 three-story addition to Pulaski Hospital, Pulaski, Virginia.

Coming Meetings

Massachusetts Hospital Association, Boston, March 6
New England Hospital Association, Boston, March 7-9
Nebraska Hospital Assembly, Lincoln, March 27
Georgia Hospital Association, Biloxi, Mississippi, March 27
Mississippi State Hospital Association, Biloxi, March 27
Southeastern Hospital Conference, Biloxi, March 28-30
Florida Hospital Association, Biloxi, March 28-30
Louisiana Hospital Association, Biloxi, March 28-30
Ohio Hospital Association, Columbus, April 2-4
North Carolina Hospital Association, Winston-Salem, North Carolina, April 3
Carolinas-Virginias Hospital Association, Winston-Salem, April 4-6
Hospital Association of West Virginia, Winston-Salem, April 4-6
Virginia Hospital Association, Winston-Salem, April 4-6
South Carolina Hospital Association, Winston-Salem, April 4-6
Tennessee Hospital Association, Chattanooga, April 8
Association of Western Hospitals, Los Angeles, California, April 8-11
Association of California Hospitals, Los Angeles, April 8-11
Mid-West Hospital Association, Kansas City, Missouri, April 11-12
Alabama Hospital Association, Birmingham, April 17
Iowa Hospital Association, Des Moines, April 22-24
Kentucky Hospital Association, Louisville, April 25-26
Arkansas Hospital Association, Little Rock, April 25-26
Tri-State Hospital Assembly (Illinois, Indiana, Wisconsin and Michigan), Chicago, May 1-3
Hospital Association of Pennsylvania, Pittsburgh, May 8-10
Kansas Hospital Association, Wichita, May 16-17
Washington State Hospital Association, Spokane, May 18
Connecticut Hospital Association, New Haven, May 22
Hospital Association of the State of New York, Buffalo, May 22-24
Minnesota Hospital Association, Minneapolis, May 23-25
South Dakota Hospital Association, Sioux Falls, May
New Jersey Hospital Association, Atlantic City, June 6-8
Catholic Hospital Association, St. Louis, Missouri, June 17-21
Hospital Association of Nova Scotia and Prince Edward Island, Bridgewater, N. S., June
Idaho Hospital Association, Boise, July 15
National Hospital Association, Houston, Texas, August 11-13
American Protestant Hospital Association, Boston, September 13-15
American College of Hospital Administrators, Boston, September 14-16
American Hospital Association, Boston, September 16-20
American Association of Nurse Anesthetists, Boston, September 16-20
Maine Hospital Association, Lakewood, September
Alberta Hospital Association, Calgary, October
Ontario Hospital Association, Toronto, October
Vermont Hospital Association, Montpelier, October
Saskatchewan Hospital Association, Regina, October
Colorado Hospital Association, Denver, November 13
Oklahoma State Hospital Association, Oklahoma City, November 16-17

THE WHITE HOUSE
WASHINGTON

January 22, 1940

My dear Doctor Carter:

During the past few months I have been giving a great deal of thought to the hospital service throughout our country. One of the greatest needs we have today is to provide adequate medical and hospital care for the people in our low wage group.

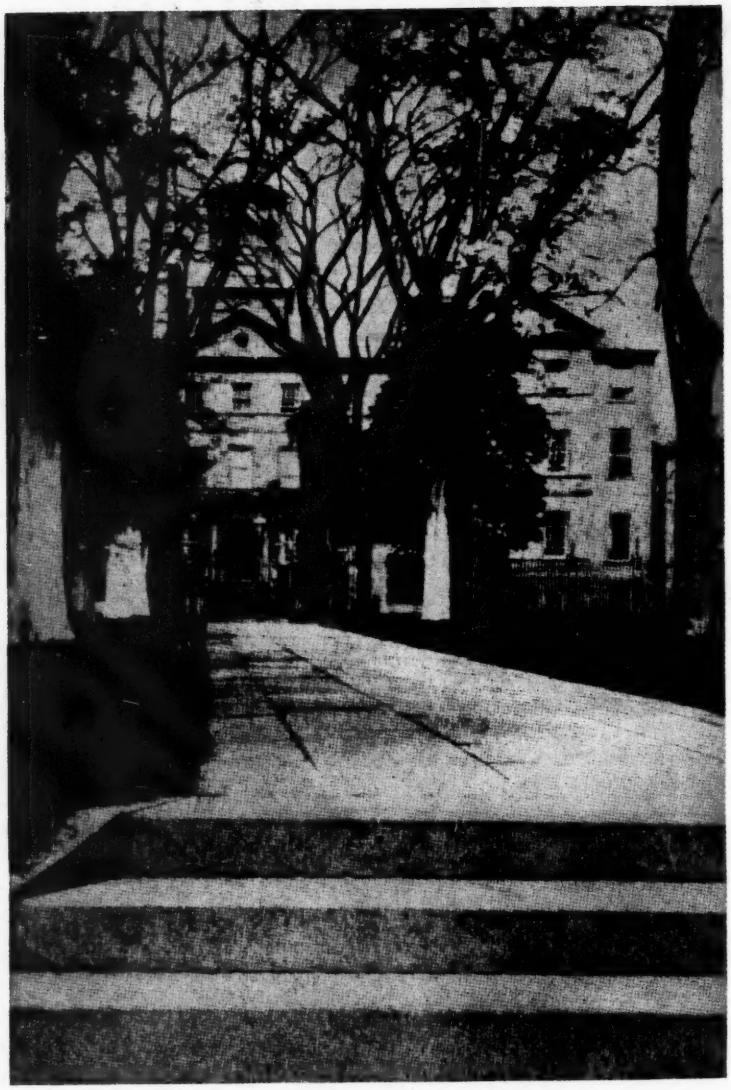
I have just recently suggested a plan for the organization of small hospitals in various sections of the country, where there are not now hospital facilities. I am looking to organizations such as yours for cooperation in this worthy project. More than ever it is fitting that we should again observe a National Hospital Day.

May I again extend my sincere appreciation of the work being done in your institutions and express the hope that you will continue to keep your standards at their high level.

Very sincerely yours,

Franklin D. Roosevelt

Doctor Fred G. Carter,
President,
American Hospital Association,
18 East Division Street,
Chicago, Illinois.



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